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CHAPTER III

DEVELOPMENT OF EDUCATION IN MIZORAM

A brief account of Mizoram

Mizoram is a hilly area in the north eastern corner of India with an area of 21,090 square kilometers. It has international borders on its three sides. The east and the south are bounded by Burma, and the west by Bangladesh. This area, formerly known as Lushai Hills was one of the districts of Assam and it was called the Lushai Hills district till 1954 when it was renamed the Mizo District. In 1971, the land was elevated to the status of Union Territory by the North-Eastern Re-organisation Act, 1971 under the name Mizoram which means the land of the Mizos.

The tropic of cancer passes through the land at a place called Thenzawl which is 50 miles south of Aizawl, the capital of the State. Mizoram has a pleasant climate of a cool summer with the temperature ranging from 20 degree centigrade to 29 degree centigrade and a temperate winter with the temperature ranging from 1 degree centigrade to 21 degree centigrade.

The total population of the land is 4,93,757 as per 1981 census and the density of population is 23. The literacy rate is very high among the Mizos, much higher than the all India average. It has 59.88% literates surpassed only by Chandigarh, Kerala and Delhi. Aizawl, the capital has a population
of 74,493 with a literacy rate of 76.45% which is the second highest literacy rate of Urban area in India.1

Indigenous System of Education In Lushai Hills

Before the advent of the British there was no organised or formal system of education in the Lushai Hills. Without a written language instructions were imparted symbolically, mostly oral-verbal in format and content. Family played a vital role as an informal agency of education for the children. The children received their education informally mostly from their parents. Boys learnt their traits from their fathers and girls from their mothers. The most suitable time for parents to teach their children was meal time when all the members of the family sat in a circle on the floor, eating food from a large common wooden plate. It was at this time that the father, who was the head of the family distributed work among the family members, gave necessary instructions for the work and spoke words of advice or caution to his children, and discussed family affairs with other members.

Girls obtained training in rearing children, cooking food, weaving and other domestic work from their mothers, grand mothers and other elderly women of the family. Apart

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from this, they had to accompany their parents to the 'jhum' for cultivation. Boys also had to accompany and assist their elders in the jhum cultivation. This process helped the children master the practice of jhum cultivation. Even today, the practice is being followed in the remote rural villages of Mizoram. Apart from this, boys were specially trained in traditional trades like carpentry, basketry and blacksmithy by elderly men in the community. In this way, in the ancient Mizo society, family occupied an important and prominent place and served as an effective agency of education. The mother who told folk tales, sang the folklores, and showed the folkways and the father who gave advice and set an example for behaviour and manners were the best teachers. In this informal context, the role of the father was specially significant in that he gave necessary instructions and corrected the behaviour and the manners of children from time to time.

'Zawlbuk': the traditional informal agency of Education.

In the traditional Mizo society, the 'Zawlbuk' or the bachelors' barrack was one of the very powerful and characteristics institutions. It can be considered as an indigenous informal agency for the socialization and the education of the youth. Here, the boys acquired the rudiments of knowledge and received training in discipline, and art of warfare, and learnt the Lushai customs and way of life.
Zawlbuk was a dormitory where all the young men of the village lodged till they got married, received training in the community life which made them fit for adult life in the tough atmosphere of lonely and warring people. As formal education had not yet found its way, 'Zawlbuk' stood out prominent as an institution of indigenous cradle of education and socialization.

The primary purpose of Zawlbuk was protection of the village against the attack by other villages. In olden days villages were constantly at war with one another and surprise attacks by neighbouring villages were not infrequent. This situation called for an arrangement which would enable and facilitate immediate and collective action by the young men of the village. From this initial concern, a Zawlbuk served a number of functions and became the most important institution in the life of a Mizo youth.

Zawlbuk was built and maintained by communal efforts and the whole village contributed free labour for its construction. Being the centre of village life, it functioned as the most potent institutionalised mechanism of social control. Every man in the village learnt all the discipline that had ever been possible in the Mizo social life from Zawlbuk. The inmates were supposed to take their turn for their daily chore of activities in the various duties for which the Zawlbuk
was responsible. All the boys in the village from the age of ten till they attained puberty attended the Zawlbuk regularly and their main responsibility was to supply firewood for the Zawlbuk. Children, except those of the chief's, were under compulsion to attend their duty in the Zawlbuk. One or two boys were commissioned to fetch drinking water at night. The boys so selected were exempted from supplying the firewood. Monitors were appointed to discipline the young boys from the time they joined this duty. The monitor had the right to punish anyone who failed to perform the common task. In the enforcement of the Zawlbuk discipline, no parent is supposed to have any say nor would the chief interfere. The inculcation of desirable habits and cherished values was the fundamental consideration in organizing the Zawlbuk activities. An action which was not socially acceptable or even slight deviation from established social norms of behaviour and conduct used to be severely dealt with.

Highly important as it was as the center of informal education for the boys, it gradually lost its existence under the influence of Christianity and the spread of education in the land. The introduction of formal education through establishment of schools and the church activities stood in the way of Zawlbuk way of living. The young boys began to find it difficult to spare time to collect firewood for the Zawlbuk.
The young men also could no longer attend to the activities of Zawlbuk as they had joined the school. Thus, the influence of Christian religion supported by formal education led to the abolition of this indigenous informal educational institution in this tribal society.

Education in British Mizoram (1892-1947).

The educational history of Mizoram can be traced back to 1894 when the two missionaries of London Baptist Mission namely Rev. J.H. Lorrain and F.W. Savidge landed and settled at Aizawl. These missionaries started learning the language and realizing the extreme need and importance, developed a new alphabet for Mizo language. The simple Roman script with a phonetic Hunterian system of orthography was followed as closely as possible. The birth of the script to the Lushai language virtually laid the foundation for formal education among the Mizos. The Baptist missionaries Savidge and Lorrain may be considered as the founding fathers of formal education and Lushai language.

The main purpose of the missionary education was to enable the people to read the Bible and the Hymn Book thus enlightening the Mizos with the gospel of Jesus Christ.

Inspite of the initial resistance and superstition, the ignorant Mizos soon became ardent lovers of learning and knowledge. The consistently high rate of literacy in this rapidly transforming tribal territory is a testimony for this. The population and literacy of Mizoram (1901-1981) and the progress of education in Mizoram (1947-1986) are presented in Appendix 11 and 12.

The first school was opened on 1.4.1897 at MacDonald Hill in Aizawl by Rev. Savidge and J.H. Lorrain, the two Baptist missionaries. In this school 68 boys were enrolled and were given elementary education. The school commissioned successfully for a while but had to be closed as the missionaries devoted their time fully to the literary work such as translation of some sections of the Bible (Gospel of St. John, St. Luke, Acts of the Apostles) and brought out Lushai-English Dictionary in the same year. However, the converts were given lessons in reading and writing on Sunday. Sunday was the free time for them to learn the scripts and the classes were held during their free time on every Sunday in which the adults were taught reading and writing. Alphabet charts were freely distributed. Thus, Sunday schools began to be popular among the Lushais and gradually it was transformed into Bible Study hour which is the best attended church service even today.

In 1898 three government primary schools were opened in three places - Aijal, Lunglei and Tlabung. During the year, 27 young chiefs and selected men from villages were given education in the government school in Aijal. They were given free ration during their stay in Aijal. In the same year, Rev. Edwin Rowland took over the charge of schools in Lushai Hills. In the mean time, the school at MacDonald Hill had been reopened by Rev. D.E. Jones, a Welsh missionary in 1897. The attendance in these schools was considerably poor in the beginning probably because of lack of interest on the part of the children as well as the parents. However, in spite of many hurdles in the beginning, the schools continued to function. The students were chiefly boys and the girls attending the schools usually had to carry their younger brothers or sisters on their backs. The teaching was of the simplest type imparting only the art of reading and writing. Those who could read and write were appointed as teachers. They acted not only as school teachers, but as evangelists and pastors. About the development of education, Lloyd says: "The school began to produce teachers as well as scholars and thus the foundations of the present Lushai Primary School system began to be laid. The Lushais were ever ready to pass on what they had learnt, however little. Many who had learnt only the alphabet succeeded

in passing on that knowledge to others. Many of the youths who came to that school at Aijal were found to have that facility of expression and felicity of illustration which mark the born teacher. And very soon some were sent on fairly lengthy visits to various villages. They brought the rudiments of education to people who had never seen a book. In a little over a generation the Lushai Hills had a higher percentage of people able to read and write than any other part of India. The teachers having become Christians themselves, spread the gospel, along with education, throughout the district.

The education in the villages of Lushai Hills had a humble beginning in 1901 when 3 primary experimental schools were started in Khawrihnim, Phulpui and Chhingchhip villages. However, these schools failed to function after a few months. However, in 1903, 9 permanent primary schools were established simultaneously in the villages and the first primary school examination was held in the same year from 25th June to 3rd July. In this examination 27 candidates appeared and 19 of them passed the examination. The top five successful candidates were awarded a stipend of Rs.3/- each per month for a period of 2 years.

In 1903, Sir Bamfield Fuller, Chief Commissioner of Assam visited Aijal. He was very much impressed by the

superior performance of the missionary schools. He then ordered the amalgamation of the government school with the missionary school and directed that all primary education would henceforth be in charge of the mission who would be given grant for this purpose. From that year onwards till the taking over of the schools by the Government of Assam and subsequently by the District Council, missions were the official agencies of education among the Lushais for about 50 years.

The Middle English Schools were opened in 1906 at Aijal and Lunglei and the first Middle School examination was conducted in 1909. Regarding the schools at Aijal, Rev. Rowland reported that the number of primary schools increased to 15 during 1903-04 and the Lushais on rolls crossed well over 400 but the attendance fluctuated considerably. Aijal, being the heart of the village schools and centre of educational activities, students from distant villages came and resided at Aijal attending the Upper Primary and Lower Primary Schools. The situation showed slight improvement within two decades of missionary activities when the Lushais showed keen desire to educate their children. This indirectly led to the increase in number of students and schools. In 1906, the government intro-

duced 6 scholarships of Rs.10/- per month for 10 years, opening an opportunity to the promising Lushais to obtain higher education until such time as there was a high school in the Lushai Hills. The objective was to make trained Lushai young men available for appointment as clerks, sub-overseers, hospital assistants, etc.  

In 1944, the first government middle school was opened at Aijal. With the opening of more middle schools and increase in enrolment, the need for opening high school was more strongly felt and the attitude of the people towards education began to be changed in a positive direction. As a result of this, the first high school was opened in 1944 at Aijal with 56 students. The attempt was possible only through Public Funds and donations. The expansion of education during 1894 to 1944 was due mainly to the sincere efforts of the missionaries and their own funds, a progress which has placed Lushais very high up in the standards of literacy, as gauged from the All India Census Report for 1931, which discloses the percentage of literacy as being as high as 12.9%, an incidence further increased to 19.3 in the 1941 census. This incidence is remarkable, compared to the 2.2 figure of the Naga Hills Census.

of 1931. This incidence covers those who can both read and write. 14

Although there was considerable expansion of primary education during the British period, the quality of education especially that of science education left much to be desired. During the British regime emphasis was only on primary education and no encouragement was given for further education. 15 However, a certain number of Lushais managed to finish matriculation course at high schools outside their own territory after the middle school education. Another serious limitation of middle english schools was the lack of an integrated course for the study. No curriculum had ever been devised specially to suit the peculiar needs of the Lushais, the agricultural people living in a hilly land, economically poor and geographically remote. The curriculum never met the needs of backward people, destined to live out their lives in a hard land amid an agricultural setting. 16 Importance was not given to vocational education. What was required for the Lushais was the practical training in agriculture and traditional vocation. Savidge, the honorary Inspector of Schools, expressed his views on the curriculum of the primary and middle schools in 1916 as

follows: "The Lushais are keen on education and the progress made during the years has been satisfactory. It is important, however, to remember that when we have educated sufficient boys to fill the Government posts available, there will be little for educated youths to do unless their education has been such as to enable them to develop agriculture and other resources of the district. I think the educational authorities of the district realise this. The widespread primary and middle level education ultimately brought a big chunk of the young people away from agricultural pursuits. They, however, remained without any employment as there was practically no other economic activity in the area. These frustrated young people were the main catalytic agents for the disturbances in 1966. 18

While tracing the drawbacks of education during the British period, the lack of science courses in the curriculum ought to be highlighted as it had a far reaching effect and continue to affect the present day science education. Inspite of the fact that people became open to the world outside through the British contacts, the door of knowledge in science and technology was kept closed to the people in Lushai Hills.

Apart from this, the initial negligence of science-education was responsible for formation of unfavourable attitudes and even a fear complex toward the study of science subjects. The lack of interest in science, the negative value-orientations and a feeling of insecurity and inferiority to undertake science courses at higher level of education (college education) and the overall lack of promotion in science education may be linked with the defective system of the missionary education in Mizoram.


The progress and expansion of education after independence was considerably higher than that under the British missionaries. Although the first high school was opened at Aijal in 1944, it was only in 1948 that the first matriculation examination was conducted under the Gauhati University, Assam. Of the 25 candidates appeared, 20 passed the examination. In 1949, 22 candidates appeared in the examination out of which 22 came out successful. The student enrolment and the number of successful candidates in matriculation examination during the first ten years in the Lushai Hills are presented in Appendix 13.

In 1950, two high schools were opened, one at Lunglei and the other at Champhai. From 1955 onwards, the enrolment

19. Lalhmuaka, Zoram Zirna lam chhinchhiahna, Aizawl; Tribal Research Institute, 1981.
increased considerably. A number of boys and girls who matriculated from the high schools at Lushai Hills joined colleges and graduated from colleges outside the land. However, it is worth mentioning that very few matriculates joined science course at the college level. Those who took the science subjects subsequently went for engineering and medical courses. Thus, there were hardly any science graduates for high schools. State had to depend on science graduates from outside Mizoram to employ as teachers at the secondary level. Lack of qualified teachers for science subjects is a major constraint to the promotion of education at the secondary and tertiary levels even today.

As the education during the British period was marked by negligence of middle and high school education, an attempt was made since 1947, to correct the imbalance created by this neglect. As a result, there was very rapid increase in the number of primary, middle and high schools during the two decades from 1950-1970.

When under the sixth schedule of the Constitution of India which conferred on the then Lushai Hills district, the status of Autonomous District and the Mizo District Council was inaugurated on the 25th April, 1952, changes were brought about in administration of the land. More schools were opened and creation of posts of inspectors of schools from 1952 onwards strengthened
the supervisory task of education department. Thus, there was remarkable expansion and improvement of school education during this period. In 1972 when the district attained the status of a Union Territory, it had 36 pre-primary schools, 390 primary schools, with 1308 teachers, 190 middle schools, 80 high schools and 3 colleges. The percentage of literacy increased to 53.79 in 1971 from that of 0.93 in 1901. 

Education in Mizoram since 1972.

There has been tremendous expansion and development in the field of education in Mizoram since 1972 when it attained the status of a Union Territory. Along with changes in other fields of development, department of education also has undergone changes in its organization and functions. Several middle schools and high schools were taken over by the Government and quite a number of them were brought under the deficit system of grant in aid. A separate Directorate of Education was created. For effective improvement of education in the state, several wings were opened under the Directorate of Education. These wings were to take care of various aspects of education. The separate wings under the directorate of education include State Council of Educational Research and Training (SCERT), Science Promotion Wing, Mizoram Institute of Education (M.I.E), Teachers' 

Training Institute (TTI), Mizoram Hindi Training Institute, Mizoram State Museum, Scholarship Board, State Archives, State Library, Tribal Research Institute, Art and Culture and Adult and Non-formal Education Units. Brief descriptions of the functions of the separate wings are given below. However, the programmes of the State Council of Educational Research and Training, the Science Promotion Wing and Teachers' Training Institute for school teachers are discussed in detail as they are directly related with qualitative improvement of the general education as well as the science education in the State.

The Tribal Research Institute since its inception undertakes systematic study and research in all aspects of tribal life and economy which will help the government in formulating the development and welfare schemes for the tribal people. The Mizoram Scholarship Board was established in 1974 to provide financial assistance to the scheduled caste and scheduled tribe students studying pre-matriculation stage within Mizoram and students studying post-matriculation outside the state. The scholarship board also carries out other important activities like conduct of Sainik school entrance test, All India Approved Residential Merit Scholarship entrance test; All India Military College Dehradun entrance examination; talented children from rural areas scholarship Block-wise examination. These tests and examinations are held yearly at Aizawl. Apart from
this the board also provides financial assistance of Rs.200/- per month per head to the Mizos who take the Indian Administrative Service coaching courses. The state archives wing collects all important old records from Mizoram and Assam states and even from the British library in London. The state museum wing has made remarkable progress in collecting and preserving varied Mizo historical monuments. An attempt is being made to expand and strengthen the number of exhibits and museum items. Library facilities have also been considerably improved with the opening of a state library at Aizawl, district libraries at Lunglei and Saiha, and sub-divisional libraries at Aizawl, Kolasib and Champhai.

The Mizoram Board of School Education

The Mizoram Board of School Education came into being and started functioning from 23rd December, 1976. The Board is an autonomous statutory body. The most important function of the Board is conduct of public examinations at various stages of school education which consists of three stages - primary, middle and high school stages of education. The Mizoram Board of School Education is responsible for conduct of the following :-

(1) High School Leaving Certificate Examination, (at the end of class ten)
(2) Middle School Leaving Certificate Examination, (at the end of class six)

(3) Primary Scholarship Examination, (at the end of class three)

(4) Teachers' Training Institute Semester Examinations, (for both Middle and Primary School Teachers)

Apart from these, production of school text books, revision of school syllabys and curriculum planning are certain other duties of the Board. For science subjects for the schools, the Academic officer is in charge of preparation of text books as well as curriculum planning.

The state library is functioning as an agent for promotion of library services to cover the whole of Mizoram. The art and culture wing of the directorate also contributes a lot in preserving the culture of Mizo society. It publishes and reprints books on Mizo customs, conducts cultural programmes in and outside the state and organises seminars, art exhibition, painting and singing competitions throughout the state. The music and fine arts branch of the art and culture wing offers courses in traditional Mizo music as well as western music and folk dances.

State Council of Educational Research and Training

The State Council of Educational Research and Training (SCERT) was established in 1980 as per recommendation of the
Working Group set up by the Ministry of Education at the instance of Planning Commission in 1977. The main objective of setting up the SCERT is improvement of qualitative and quantitative aspects of school education and teacher education. The projects and programmes undertaken by SCERT are listed below:

(a) National Population Education Programme.
(b) Educational Technology Programme.
(c) Integrated Education of Disabled Children.
(d) Improvement of English Teaching at Secondary Schools through the District Centre for English set up in the Institute.
(e) UNICEF Assisted Education Projects - Nutrition/Health Education & Environmental Sanitation (NHEES-Project IA) - Developmental Activities in Community Education and Participation (DACEP - Project III). - Comprehensive Access to Primary Education (CAPE - Project V).
(f) Asian Programme of Educational Innovation for Development/(APEID).
(g) Fifth All India Education Survey.
(h) Non-Formal Education Programme.
(i) Educational & Vocational Guidance Services.
(j) National Scheme of In-Service Training of School Teachers.
(k) Operation Blackboard.

For the effective implementation of the various schemes, SCERT had a number of constituent wings. These wings are assigned specific tasks. The names of the different wings under SCERT and their functions are mentioned below:

1. Administrative Wing.
2. Teacher Education & Extension Wing.
3. Educational & Vocational Guidance Unit.
5. Special Education Cell.
7. Research & Development
9. Language Promotion Unit.

Being an Institute concerned with qualitative improvement of school education as well as teacher education in the State, the SCERT took itself to the task of experimenting various educational programmes and projects. For this purpose, all the wings and units are assigned specific tasks.

**Administrative Wing**

The administrative wing of the Council headed by a Deputy Director has the following objectives:

(1) To oversee the progress and problems of implementation of various schemes and project of the SCERT.
(2) To co-ordinate various wings and units in their respective works and tasks.

(3) To organise training/orientation courses for educational officers, supervisors and heads of schools in educational management and planning.

(4) To act as liaison agent between the Government and the National Council of Educational Research and Training (NCERT).

**Teacher Education & Extension Wing:**

This wing is held responsible for implementation of National Scheme for In-service training of school teachers, formulated by the Ministry of Human Resource Development, Government of India. The objectives of the scheme are to familiarise the teachers with the salient features of National Policy on Education, and to make them aware of their role in bringing about the meaningful change. Training courses were organised for the teachers of primary, middle and high schools. During 1987-1988, 702 teachers were given training under the resource persons drawn from various wings of the education department. Teacher Education and Extension Wing will continue to attach great importance to this Massive Teachers' Training Programme, as it is felt necessary to bring awareness about the new dimensions and thrusts laid down in the National Policy on Education (1986). This kind of in-service education and training become
most important mode to meet new expectations as a result of the New Policy. When fully developed, this wing will look after all programmes relating to teacher education including the Pedagogical and Documentation Centre.

**Educational & Vocational Guidance Unit**

The role of Vocational Guidance and Counselling in the context of growing unemployment, changing technology and increasing number of educated youths can hardly be over-emphasised. Thus, with a view to providing guidance and counselling services to the students of high schools, Educational and Vocational Guidance Unit was set up under SCERT in 1981. The unit is manned by an Assistant Vocational Guidance Officer. The Unit has introduced guidance services at the high school level with the following objectives:

I) To create a guidance consciousness and understanding among the headmasters and teachers of high schools.

II) To train guidance personnel for the secondary schools.

III) To provide academic and technical guidance to teachers working in the guidance cell of the secondary schools.

IV) To act as supervising and consulting agency for the administrative as well as teaching personnel working at the school level.
V) To procure and prepare useful educational and occupa­tional material as and when necessary and supply the same to the guidance cell of the secondary schools.

VI) To construct, standardise or adopt psychological tests for use in the SCERT and secondary schools.

VII) To prepare and publish guidance aids: tools, bulletins and news letter for use in schools.

VIII) To conduct research studies as may be necessary for the preparation of materials, and for the evaluation of guidance programmes.

IX) The primary objective is to help young students in the identification and development of their abilities and interest, thereby helping them to plan for a better and brighter future.

Population Education Cell

In 1982, Mizoram joined the National Education Project launched in 1980, by the Ministry of Education and Culture, Govt. of India. The primary goal of the Project is to enrich the existing school curriculum by including more relevant, related population concepts in the curriculum, which will have far reaching consequences in improving the quality of life of the people. The major objectives of the project are as follows:
(a) To develop among the students a keen insight into the inter-relationship between population change and the process of socio-economic development vis-a-vis the individual, the family, the society, and the nation and the world.

(b) To develop an awareness among the students and the teachers about the population situation in the country.

(c) To provide population education its rightful place in the curriculum of the formal as well as the non-formal programme of education in Mizoram.

(d) To develop desirable attitudes and behaviour in the students and the teachers as well as in the community at large towards the population issues so that they may arrive at rational decisions about the size of the family when they become responsible citizens thereby contributing towards improvement of the quality of life.

The curriculum objectives of Population Education is determined taking into consideration the national objectives, the objectives of school curricula and the age of the students. The curricular objectives are the following:

(1) To create awareness among people about the quality of life in relation to population change.
(2) To place population as a focal point of the developmental process of Society and to ensure that people become problem solvers and not problem makers.

(3) To emphasise the positive role of population as a human resource developed through education, health facilities and nutrition so that qualitative improvement of human resources is ensured.

(4) To endeavour to develop positive attitudes towards science and technology towards liquidation of poverty.

(5) To promote desirable attitude towards work, to help develop productivity consciousness.

The SCERT is instrumental in implementing population education in the secondary school curricula. The subject is introduced by the Integrated Approach. At present, the Cell has taken up the task of introducing population education in the curriculum of teachers' training programme for the primary and middle school teachers. As for the secondary school teachers, population education exists as one of the subjects at the Mizoram Institute of Education.

Special Education Cell:

Set up in 1984, the Cell is looking after a Centrally sponsored scheme known as 'Integrated Education for the Disabled Children' (IEDC). The National Policy on Education 1986 recommends education of the children with locomotor handicaps
and other mild handicaps in common schools. The objectives of the scheme are the following:-

I) To place disabled children in schools and to integrate them with normal children with an aim of eliminating social distance and distinction between the normal and disabled children.

II) To assess disabled children with a view to identifying the nature of their disabilities etc.

III) To promote national efforts to provide disabled children with proper assistance, care and guidance to ensue their full integration into society.

The scheme of integrated education for the disabled children is being implemented in a number of primary schools in Mizoram. The successful implementation of the IEDC depends on the responsiveness of the administrators and teachers in the school. As such, the cell organised training courses for teachers associated with the scheme. Financial assistance of Rs.15 lakhs (Rs.10 lakhs being salary of Resource Teachers) is obtained from the Central Government.

Educational Technology Cell (CSS).

The Educational Technology Cell was set up in the year 1984 - 1985 by the State Government with the assistance of Central Government for the improvement of education at all levels with the help of mass media and modern educational
technologies including radio and television.

The Cell aims to achieve various objectives such as universalisation of Primary Education, Adult Education, Vocationalisation of Education, quality improvement etc. by making use of scientific and technological innovations and devices. With a view to achieve these objectives, the Educational Technology Cell was opened in the SCERT with 4 gazetted officers and 7 supporting staff. Since its inception, this cell has taken steps for making efficient use of Mass Media and Modern Technologies. For the effective implementation of educational technology programme in Mizoram, schemes are submitted every year to the Central Government.

The Cell organised orientation course and workshops for the development of teaching aids and radio scripts. Steps were also taken for production of tape slides.

Research and Development Wing:

To provide studies and investigations in the various problems of education, General Research and Development Wing plays an important part. This Wing is staffed with one Educational Research Officer and one Assistant Research Officer. This Wing looks after the Associated Centre for Asian Programme of Educational Innovation for Development (APEID) in which SCERT is one of the associated Centres. The main activities
of this wing are given below:

I) To conduct research studies and investigation into various educational problems.

II) To conduct educational survey within the state from time to time and for that matter to collect vital educational statistics of the state education system.

III) To conduct National Talent Search Examination every year.

IV) Preparation and publication of educational magazine.

V) To experiment and practise innovative ideas and thoughts in the school system with the help of teachers. This is under the Asian Programme of Educational Innovation for Development (APEID).

Language Promotion Wing:

The District Centre for English was set up in the SCERT, Aizawl, in 1985 as per recommendations of two conferences of English Language Teaching Institutes, Education Secretaries, Directors of Education and other Educational Administrators, held at CIEFL, Hyderabad during 1979 and 1981. The following are the objectives of the District Centre for English:

(1) to provide saturation level training to all teachers of English in the state especially in the rural areas, through short orientation courses followed by long term professional support and guidance through correspondence programmes.
(2) to impart saturation level training to high school teachers in the most economical way and in the shortest possible period of time.

(3) to identify and develop leadership potential among high school teachers of English who could be given higher and more intensive training course and whose services could be utilised by the state govt. in the ELT programme.

(4) to provide consultancy service and academic support to the school administration at the district level.

(5) to serve as an ELT Resource Centre by building up a library of ELT reference materials, additional reading materials, audio-visual aids, etc.

(6) to provide non-formal learning of English for school drop-outs, professional groups and disadvantaged sections of society.

(7) The District Centre is also expected to function as a Resource Centre catering to the needs of the schools in the state.
THE SCIENCE PROMOTION WING

Since Mizoram became a Union Territory in 1972 and had its own Directorate of Education, one of the steps taken was to improve and reorganise the teaching of science in schools. In 1972, the Government of Mizoram signed an agreement with the NCERT to take up the Unicef Project for improvement and reorganisation of the teaching of science at school stage. A separate wing of Science Promotion was established in June 1973 to carry out various tasks under this project.

The UNICEF project was carried out in 50 selected Primary schools and 30 selected Middle schools in Mizoram. The project was intended to strengthen the science curricula of classes A, B, I, II, III in Primary schools and for classes IV, V and VI in the Middle schools. The project was launched during 1973-76 keeping in view the following objectives:

1. To inculcate the spirit of scientific enquiry among students.
2. To develop the habit of scientific temper and attitudes in the minds of the students.
3. To catch up the development of science in advanced states
4. To remove superstitions among the students through scientific means.
5. To produce technically qualified persons.
6. To promote science in higher learning.
Preparation of textbooks and other instructional materials and the training of the teachers were the specific activities carried out through the project.

**Preparation of Instructional Materials**

(1) Text Books for classes - A, B, I, II, III, IV, V, VI

(2) Guide Books for classes A, B, I, II, III, IV, V, VI

(3) Kit Guide Books for classes III, IV, V, and VI

The teachers were given training in the following aspects:

(1) Objectives of UNICEF Project

(2) Uses of Science kits

(3) Method of Teaching Science

(4) Practical and Demonstration in Science

(5) Science hobbies and Improvisation

(6) Scientific Methodology

(7) Science corner

Apart from bearing the 75% of the cost of training of 50 Primary school teachers and 30 Middle school teachers, the UNICEF also donated papers for printing the various text books and guide books. The same is also borne by the UNICEF at the universalisation stage following the pilot stage of 3 years. The resource persons of the State of Mizoram had been trained by NCERT from 1974 to 1978.
After three years of introduction the project was universalised. Science subject was introduced in all stages of school education as compulsory subject for all school students. Similar actions as in Pilot stage have been carried out for all the schools. The teachers were trained for a period of 10-15 days in the first phase. The trained persons were again re-oriented after a lapse of 5 or 6 years. About 120 teachers received such training yearly during the last 10 years.

Science Curriculum

The NCERT syllabus have been taken up in Mizoram. For classes I to V the science curriculum includes the environmental science covering the following topics:

(1) Our Universe
(2) Rocks and Minerals
(3) Weather, Air and Water
(4) Work, Force and Energy
(5) Matter and Materials
(6) Living things
(7) Human body, Health and Hygiene
(8) Housing and Clothing
(9) Living things
   (a) animals
   (b) plants
(10) Safety and First Aid.
For classes VI-VII, the science syllabus is mainly carried out in separate disciplines of physics, chemistry and life science subjects. The standard of science curriculum from I - VII is the same as that of the rest of the country. The curriculum of classes VIII, IX and X was not able to bring to the national standard of the NCERT for want of qualified science teachers. However, it is proposed to upgrade the standard of science curricula with effect from 1990 by following the National Syllabus under NPE 86.

Apart from this, the Science Promotion Wing, after its inception has carried out a number of activities for the promotion of science for the students, teachers as well as for the public as given below:

1) Conduction of science exhibitions, science seminars for high school students.

2) Provision of incentives in the form of cash award for proficiency in science and also in mathematics subjects.

3) Establishment of science laboratory in schools and in the office of Science Promotion for training purposes.

4) Equipping science laboratories with furniture.

5) Establishment of Science gallery and computer education in the office of Science Promotion Officer.
In order to popularise science, the Department of Education is publishing an educational journal "Zirna Eng" in which articles on science are published from time to time. A purely science journal is also published monthly by the Mizoram Science and Mathematics Teachers Association. The following text books have been brought out by this association:

1. Science is Doing Class I
2. Science is Doing Class II
3. Science is Doing Class III
4. Science is Doing Class IV
5. Science is Doing Class V
6. Teachers Guide for classes 1 and II Text
7. Teachers Guide for class III Text
8. Teachers Guide for class IV Text
9. Teachers Guide for class V Text
10. Kit Guide for Physics for class VI
11. Kit Guide for Biology for class VI
12. Kit Guide for classes III-V
13. Physics Part 1 for class VI
14. Biology Part 1 for class VI
15. Science for class VII
16. Physics for class VIII
17. Chemistry for class VIII
18. Biology for class VIII
Science Exhibition in the high schools of Mizoram is held every year in collaboration with the NCERT. A substantial grant of Rupees ten thousand is donated to Mizoram every year for conduction of science exhibition. The results of the best ten exhibits are sent to NCERT for selection of participation in the National Science Exhibition held every year. About 10-20 schools participate in the science exhibition each year. Mizoram also participates at the Eastern India Science Camp organised by the National Council of Science Museum. About 25 students are sent for the camp each year. The number of students participating in the state level science exhibition is about 150 every year and five were selected to participate at the national level. The objectives of these competitions are mentioned below:

1. Encourage the pupils in the
   (i) development of interest in science and scientific skills;
   (ii) habit of exploration and creativity;
   (iii) critical thinking in the design and development of apparatus for various investigations.

2. Induce healthy competition amongst participating students.
3. Familiarise the students with the
   (i) changing profiles of scientific ideas,
   (ii) inter-relation between science and technology;
   (iii) relationship of scientific facts, methods and technology.

4. Discover the areas in which guidance is required for developing scientific talent at the different stages.

5. Integrate scientific ideas related to daily life situations.

Another important activity undertaken for the promotion of science education is a three-tier-science-seminar organised at District, State and National levels. About ten schools participate from each of the districts of Aizawl, Lunglei and Chhintuipui. The best two winners of the district level seminar then participate at the state level seminar and the top winner of the state level is selected for the national level seminar held at Delhi in the month of October every year.

Since 1978 the Department of Education, Mizoram has been organising science seminar for the high school students every year. The main purposes of the seminar are (1) to encourage the students and help them have interest in the study of science subjects, (2) to inculcate a spirit of scientific enquiry and analytical thinking in the minds of young students. For the first four years, the Government of Mizoram, in collaboration
with Birla Industrial Technological Museum, Calcutta organised the seminars but now the Government of Mizoram in collaboration with the National Council of Educational Research and Training (NCERT) organises these seminars. The seminar topics prepared and conducted so far are cited below:

1979 - Science, a boon or a curse for children
1980 - Solar Eclipse
1981 - Renewable Source of Energy
1982 - Space and mankind
1983 - Communication today and tomorrow
1984 - Environment and Human survival
1985 - We and the Ocean
1986 - Green Revolution and our future
1987 - Pollute and Perish 'Conserve and Flourish'

The seminar topic for 1988 will be 'INFORMATION REVOLUTION'. The selection of the seminar topic is not done from the government of Mizoram but from Delhi at the national level. The science promotion wing, under the Directorate of Education, has been given the task and responsibility of conducting science seminars for High schools and were found to be very effective towards promotion of science education in Mizoram.

As a result of the efforts made by the Education Department, the following results were achieved with regard to
the teaching of science in Mizoram.

1. The learning of science has become a joy among the students and it has also become one of the most favourite and interesting subjects of studies for the students.

2. Percentage of pass in science subjects at the H.S.L.C. examination has gone up year by year. Pass percentage in science subjects at the 1987 H.S.L.C. examination was 54.72 while the overall pass percentage was 38.10.

3. Number of students taking up science courses at higher level of education such as pre-university and college levels also has considerably increased. Many students are now going for technical courses in various colleges outside the state.

4. It is hoped and expected that shortage of technical man power in Mizoram will be met with in a few years time. At present there are about 800 students taking up various courses in Agriculture, Medicine, Engineering, Forestry, Veterinary and allied science subjects.

The Science Promotion Wing of the Education Department have chalked out a number of schemes as future plans for improvement of science education. The following are some of the schemes
for the promotion of science in the State:-

(1) Establishment of laboratory and supply of equipments and books in all high schools under centrally sponsored scheme which is to start from 1988.

(2) Introduction of practical classes in high schools by 1990 and provision of science laboratory to all the secondary schools.

(3) Upgradation of science teaching in all schools.

(4) Provision of more incentives to students for taking up higher studies in science and mathematics.

(5) Establishment of Science college is also under consideration.

Status of Teacher Education in Mizoram

Due to the rapid increase of primary schools in Mizoram, the need for teacher education was strongly felt. The first training course for Primary School teachers was conducted at Aizawl by Mr. Pasena who had undergone B.T. training in England in 1923-1924.\(^2\) The intake capacity of this course was 12 and it was of 3 months duration and the course of study included method of teaching, school administration, child psychology and content subjects. The duration of the course was lengthened to one year in 1927 and the course of study

was expanded by adding subjects like arts, mother tongue, science and geography. The training classes were attached to the Bible School until 1939. In 1940 a separate teacher training institute was opened at Aizawl with an aid of Rs.3000/- from the Government of India. In 1943, this institute was shifted to an interior village, Sialsuk for fear of Japanese invasion during the second world war. In 1932 an English Missionary H.W. Carter started a 2 year course of teacher training for Primary School Teachers in South Mizoram with the intake capacity of only three students. The course of study included subjects like method of teaching, English and child psychology. In 1934 the intake capacity was raised to six and twelve in 1937. The curriculum of the course contained subjects such as mathematics, mother tongue, English, history, general geography, method of teaching and child psychology. This training course was continued till 1957 and was attached to the Middle English school of Serkawn. As the missionaries were not allowed to supervise M.E. School of Serkawn, a separate teacher training institute was opened in 1952 and subjects like Hindi, general science and commercial geography were added to the existing

22. Source: Mr. C. Rokhuma, Instructor of TTI(Rtd.) Aizawl from 1947-1974 and Mr. Muka, Secretary. Mizoram Presbyterian Synod.
course of study. This institute continued to function until it was replaced by the Government Teachers' Training Institute opened in Lunglei in 1974.\footnote{Source of Information: Mr. Suakkunga, formerly a master of the Teachers Training Institute, Serkawn.} In 1953, a Basic Training Centre was opened at Aizawl. With the establishment of this centre for Primary School teachers, the existing teacher training institute managed by the missionaries was abolished. The duration of the course was two years and the course of study included subjects like mathematics, general science, mother tongue, school organisation and crafts, carpentry, sewing, etc. A normal training school for training of middle school teachers was established in 1970\footnote{L.N. Tluanga, Education in Mizoram: Retrospect and Prospect, MBSE Journal. Aizawl, Mizoram Board of School Education, 1981.} which had really improved the quality of middle school education in Mizoram. In 1974, these two training institutes were amalgamated into one institution and was then named the "Under Graduate Teachers' Training Institute" (U.G.T.T.I). In the same year, another Teachers Training Institute was opened at Lunglei for the Primary and Middle School Teachers of Lunglei and Chhimtuipui Districts. The UGTTI was later renamed as Teachers' Training Institute' (TTI) and now it is proposed...
to be upgraded into a District Institute of Education and Training (DIET).

Prior to 1975 there was no training institute for secondary school teachers in Mizoram. After independence, the number of schools as well as teachers increased considerably. Secondary school teachers were deputed by the Government to undergo professional training outside Mizoram. This involved a huge amount of expenditure on the part of the Government. In 1975, the first training college for secondary school teachers was established at Aizawl under the name 'Mizoram Institute of Education' (MIE). This institute is affiliated to North Eastern Hill University (NEHU). The college offers B.Ed course of one year duration. Since its inception till 1984, 90% of the available seats were reserved for in-service teachers, the remaining 10% were for pre-service. From 1985 onwards all the seats have been reserved for the in-service teachers only. Secondary school teachers from all over the state undertake professional training from the MIE every year. Selection for deputation from the schools is made on the basis of seniority in service of the teachers. The year-wise breakup of the enrolment of the teacher-trainees and the result of the Mizoram Institute of Education is given in Appendix 14.
Higher Education in Mizoram

The opening of a night college at Aizawl in 1956 was another salient landmark in the history of education in Mizoram. In the initial stage classes were held at night. This enabled the Mizos working in the offices and various fields to pursue further studies. This college was taken over by the Government in 1965. The night classes were shifted as regular day college and the college was provincialised as Pachhunga Memorial Government College. In 1964, the first college in the south Mizo District was opened. At present there are 11 colleges in the whole of Mizoram. One of them is a Women's College. One is Government college, another one is a University constituent college and the rest are deficit colleges. However, when compared to other parts of India, the higher education in Mizoram is at an infant stage, and has a long way to go in the path of progress and improvement. Most of the colleges do not have adequate facilities and are housed in rented buildings. Some of them even lack proper classrooms, library and laboratory. Out of 11 colleges, only 2 are offering science courses. Of these two colleges, B.Sc course is offered in Pachhunga University College, Aizawl, while the Government college at Lunglei offers only the science course at the pre-university level. The
rest are Arts colleges. Commerce is offered in Hrangbana College and Home Science in Zirtiri Women College, Aizawl. Professional courses such as Engineering, Medicine, Veterinary Science, Agricultural Science etc. do not figure at the tertiary level. However, Government selects students on the basis of merit and sends them for higher studies in professional streams in colleges outside Mizoram. The enrolment in science courses at Pre-University and Graduate levels are very few and details shown in Appendix 15 shows a gradual decrease. In this age of science and technology when leading nations strive and vie for scientific and technological advancement, it stands to reason that unless strong emphasis is laid on the need for improvement in science education in Mizoram this territory shall be left far behind in its march towards progress. Steps must be taken to remedy this serious drawback in science education.

Relevance of the present Research

The foregoing review of the development of education in Mizoram indicates that while there is an appreciable progress in education at all levels, the state of science education leaves much to be desired. Although the State has achieved considerably high percentage of literacy (59.88 in 1981 census) there is a low pass percentage and achievement
at high school leaving certificate examination in science subjects. Students who go for higher studies opt for arts subjects. As such, the enrolment in science stream is very low when compared to arts subjects. It is also noticed that many wind up their studies at Pre-university level and very few continue their studies offering biology or life sciences. As such the system fails to promote science education in general and is unable to produce graduates in science with physics, chemistry and mathematics. There may be a number of reasons for this serious drawback in science education. It may be due to lack of interest in science on the part of the students, lack of positive attitude towards science and lack of encouragement on the part of the parents. It has also been noticed that there is a shortage of qualified teachers at the school and college levels. Another interesting observation is that majority of students who go for science courses in colleges are boys.

Although there is a lot of effort for the promotion of science in the state, scientific studies analysing the factors related to students' attitudes and achievement in science are conspicuous by their absence. Therefore, it seems significant and highly worthwhile to undertake the present investigation. The study also assumes significance as it is a pioneering
attempt to identify the constraints of science education and shall contribute to bring about improvement and expansion of science education in the state of Mizoram.