VOCATIONAL EDUCATION AT HIGHER SECONDARY STAGE OF EDUCATION IN MIZORAM: STATUS, PROBLEMS AND PROSPECTS

Thesis

Submitted in Part Fulfilment for the Degree of

Doctor of Philosophy in Education

By

J. LALHRIATPUII

DEPARTMENT OF EDUCATION

MIZORAM UNIVERSITY

AIZAWL, MIZORAM

June, 2018

Prof. Lalhmasai Chuaungo
Department of Education
Mizoram University
Tanhril-796004
Aizawl, Mizoram

MIZORAM UNIVERSITY
DEPARTMENT OF EDUCATION
AIZAWL 796 004 MIZORAM
Mobile : +919436154401
E-mail: lalhmasai.c@gmail.com

(A Central University Established by an Act of Parliament)

Date: 7th June, 2018

Certificate

This is to certify that the thesis entitled *"**Vocational Education at Higher Secondary Stage of Education in Mizoram: Status, Problems and Prospects**"* submitted by J. Lalhriatpuii, for the degree of Doctor of Philosophy in Education, of the Mizoram University, Aizawl, India, embodies the record of original investigations carried out by her under my supervision. She has been duly registered and the thesis presented is worthy of being considered for the award of Ph.D. degree. This research work has not been submitted for any degree of any other university.

(LALHMASAI CHUAUNGO)
Supervisor

MIZORAM UNIVERSITY

AIZAWL: MIZORAM- 796 004

Month: June **Year: 2018**

DECLARATION

I, J. Lalhriatpuii hereby declare that the subject matter of the thesis entitled 'Vocational Education at Higher Secondary Stage of Education in Mizoram: Status, Problems and Prospects' is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or, to the best of my knowledge to anybody else; and that the thesis has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to Mizoram University, Tanhril, Aizawl for the award of the degree of Doctor of Philosophy in Education.

(J. LALHRIATPUII)
Candidate

(Prof. B.B. MISHRA)
Head,
Department of Education

(Prof. LALHMASAI CHUANGO)
Supervisor

ACKNOWLEDGEMENT

It is a matter of immense pleasure to write acknowledgement finally. Firstly, I would like to thank God Almighty for giving me the strength, ability and opportunity to undertake this research study.

I would like to express my deep sense of gratitude and heartfelt thanks to my research supervisor Prof. Lalhmasai Chuaungo, Department of Education, Mizoram University, Aizawl for her invaluable guidance, dedication, patience, understanding and encouragement throughout the study. Without her supervision, the study would not have come out in its present form.

I convey my sincere gratitude to staff of State Council of Educational Research and Training for providing me with the necessary materials, annual reports and others.

I offer my sincere thanks and gratitude to all the teachers and students of vocational courses, and parents of vocational students who responded to my questionnaires. Without their help, it would not have been possible for me to complete this work.

I am also very thankful to all my friends for their moral support and helping hands throughout this study.

My acknowledgement would be incomplete without thanking the biggest source of my strength - my family. I am extremely grateful to my parents for their love, prayers, caring and sacrifices for educating and preparing me for my future. I am very much thankful to my husband and my son for their love, understanding, prayers and continuing support to complete this research work.

Dated: Aizawl
The 7th June 2018

(J. LALHRIATPUII)
Department of Education
Mizoram University
Aizawl, Mizoram

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1.1 Concept and Significance of Vocational Education

Vocational education refers to skilled learning and work experience. It has several differing concepts which mostly arise from the tradition. One concept is that it is a craft-oriented education or training where the learners learn with manual activities rather than intellectual activities. Those who are unable to profit from the traditional academic learning generally opt for this sort of industrial training. There is the concept that vocational education is education for productive purposes or socially useful productive work. Vocational education for productive work basically provides learning experience of a vocational nature, training learners to fit the requirement of a hierarchical work force. It imparts education with practical activities to prepare a person for a socially useful employment and a proficient worker. As the trainee directly develops expertise in a particular group of techniques it is also sometimes referred to as technical education (Mohankumar, 2008).

UNESCO in its recommendation of 1974, defined vocational education as a 'Comprehensive term embracing those aspects of the educational process involving, in addition to general educations, the study of technologies and related sciences and the acquisition of practical skills, attitudes and knowledge relating to occupation in various sectors of economic and social life' (Swain, 1998).

There are two types of vocational education available in India – formal and non- formal. The formal vocational education or training follows a structured program as in formal education system and leads to certificates, diplomas or degrees, recognized by State or Central Government, Public Sector and other reputed concerns. It can be in secondary stage or post secondary stage. In most of the states, vocational and general courses are offered by the same institution. Non-formal or outside formal education school enables a person to carry out his ancestral trade or occupation by helping in acquiring some marketable expertise. According to the National Sample Survey Organization there are five categories of schools that impart vocational education, they are- (i) local body, (ii) private aided, (iii) private unaided, (iv) government, and (v) not known. The courses cover a wide area; all the experiences which could further lead to a successful job can be included. At the time of

introducing vocational education in India the courses included metal work, leather work, tailoring, carpentry, agriculture, sericulture, printing, commerce, type writing, electric wiring, needle work, embroidery, etc. (Biswas, 2008).

Every man needs to work or does something to earn his living. One who does not have inclination to study general courses or who may not be able to pursue higher education for certain reasons can opt vocational courses to prepare themselves for vocation, occupation and profession. Employers always seek for skilled and educated youth to be his workers. Therefore, it is very necessary for those who perform poor in general education to join vocational education as it helps the learners to be skilled and in turn, offers better employment opportunities. The demand of the changing society due to several development, population growth, increase in consumption and unemployment require the attention of the policy makers and planners.

Education became bookish with the introduction of formal education. It prepares the child for white collar job and mostly general school does not make provision for manual work. The Wood's Despatch committee in 1854 pointed out this and contemplated the introduction of pre-vocational education at the secondary stage. (Sacheti, 2007). The document of NCERT 'Higher Secondary Education and its Vocationalisation' which set out a model conceptual framework for implementation was presented in the country. This document was reviewed by the National Review Committee for Higher Secondary Education which was appointed by the Ministry of Education in 1977-78 (Pilz, n.d.). The committee came out with the report titled 'Learning to do – Towards a Learning and Working Society' and the programme for vocationalisation of higher secondary education was initiated and implemented (Shodhganga, n.d.). The Ministry of Human Resource Development, Government of India and NCERT have started many actions and made many proposals for the diversification and vocationalisation of secondary education (Sharma, 1994).

1.2 Historical Background of Vocational Education in India

In this section, the development of vocational education in different periods is presented as below:

***Ancient Period*:** The development of vocational education of the ancient period may be understood in the following periods:

***Vedic Period*:** Vedas are one of the oldest literatures of the world. In the Rigveda we find reference to technical and vocational education like descriptions of construction of canals, bridges, vehicles incorporating fast speed and beautiful palaces. In the Vedic literature one finds quite a lot of discussion about the manufacture of cotton, silken and woollen cloths, agricultural implements and arms (Chaube, 2010). Education was given according to the vocational needs of the different four castes- Brahmins, Kshatriyas, Vaishyas, the last group of the society Shudras were not given the right to education (Commager, 2017).

***Post Vedic Period*:** Vocational education continued as prevalent in the Vedic age during this epic period of Ramayana and Mahabharata. In the Ramayana, the epic written by Valmiki, we find Rama's frequently travelled by PuskpakViman and cross the sea through bridges for conquering Ravana. In the Mahabharata, we find mentioning of houses made of wax, means of fast transport, various types of weapons and fire-arms used in war (Chaube, 2010). The purpose of education was not merely giving knowledge to an individual but produces specialists of the best kind in various fields (Progress of Education, n.d.).

***Buddhist Period*:** To meet the demand of the society and the professional education the science of medicine, architecture, painting, sculpture, veterinary and chemistry were included in the curriculum. The study of Ayurveda (science of medicine), Dhanurveda (science of war) and Gandhavarveda (art of music) were also developed much during this period (Maheshwari, 2012a).

***Muslim Period*:** During this period, provision was made for technical, professional and vocational education. The art of making various types of silken, wood work, architecture, sculpture, fine arts, woollen and cotton cloths, painting, drawing and ornaments developed remarkably (Maheshwari, 2012 b).

***British Period*:** After establishment of the British rule in India, they need technician and various types of worker as they engaged themselves in consolidating it. So, they decided to establish some technical and vocational colleges. The main reason was expensive hiring expert from abroad for various workers (Chaube, 2010).

1.2.1 Pre Independence Period

Wood's Despatch of 1854 emphasized the importance of introducing occupational education at the secondary school stage in India (Palanivel, n.d). The Indian Education Commission under the chairmanship of Hunter (1882) recommended that the vocational education should be given an important place in the curriculum (Sharma & Sharma, 2006). After the recommendation was accepted, practical subjects were introduced in secondary schools, intended to fit youths for commercial or non-literary pursuits. Technical and vocational subjects were also included in the curricula of high schools in different provinces (Palanivel, n.d).

The Calcutta University Commission, 1917 which was also known as the Sadler Commission pointed out that the great majority of University students pursued purely literary courses which do not fit them for any but administrative, clerical, teaching and legal careers. They recommended formation of separate high schools and intermediate board in every province (Four Authors, 1984).

The Hartog Committee, 1929 recommended retention of boys in the middle vernacular school intended for rural pursuits accompanied by diversification of curriculum in those schools. It also suggested diversion of boys to industrial and commercial careers by providing provision of special instruction in technical and industrial schools at the end of the middle stage (Four Authors, 1984). The Sapru Enquiry Committee, 1934 suggested 11 years of school education (5 years for primary, 3 years for lower secondary and 3 years for higher secondary) with vocational studies after 11 years of education (Palanivel, n.d.).

The Abbot – wood Advisory Committee, 1936-37 recommended the establishment of Vocational Training College at Delhi and single polytechnics where training in many vocations should be given. They also recommended the establishment of Advisory Council for Vocational Educational entrusted with the entire responsibilities of organising vocational education and prescribing curricula for them in each province (Saini, 1980).

The Sargent Report 1944 brought in changes and an increase in the facilities for vocational education at the secondary stage. It recommended the reorganization of High Schools into two types- Academic high schools for arts and science and

Technical high schools for vocational and commerce (KHHSHOU, n.d.). Both the objectives should provide some preparation for the careers in which pupil will enter after leaving school. In respect of technical and vocational education the report divided the workers needed by Indian Arts and Industries into four categories; a) Chief Executives and research workers of the future, b) Minor executives, foremen, charge hands etc., c) Skilled craftsmen, and d) Semi skilled and unskilled labour(Aggarwal and Aggarwal, 1992).Other recommendations related to technical and vocational education were- a) more practical character should be started at the earliest, education and the curriculum should aim at making boys and girls familiar with practical as well as academic projects. b) technical education should be treated equally with the general education and should be regarded as an integral part of any educational system. c) polytechnics are to be preferred to monotechnics wherever circumstances permitted (Saini, 1980).

The recommendations made by the Commission and Committees set up in the pre-independence period seem to have made little impact on the educational processes in relation to vocational education. However, in the post independence period there has been a succession of Commissions related to vocational education.

1.2.2 Post Independence Era

The University Education Commission (1948-49) chaired by Dr. S. Radhakrishnan made remarkable suggestions on vocational education to reduce the hustle of students to Universities in order to assign them into varied and sensible fields of training and work. The University Commission recommended courses of professional education in Agriculture, Commerce, Law, Medicine, Engineering and Technology so that the students on completion of these courses may have substantial insight and skill in their respective fields of study. It also recommended establishment of Rural University for the development of agriculture and rural areas; keeping in mind, the major population depends on agriculture (Chaube, 2010).

The Secondary Education Commission (1952-53) under the chairmanship of Dr. A.L. Mudaliar recommended a new organisational pattern with a period of duration of seven years, the break up of three years of junior secondary stage and four years of higher secondary stage. Diversification of courses was recommended at the higher secondary stage from class ix, which include both general and vocational

subjects. In this way the students may have an opportunity to choose according to their interests, aptitudes and needs (Edufocus, 2017).The commission also recommended the foundation of ‘multipurpose schools’ for the study of vocational and technical subjects. Improvement of vocational efficiency which comprises of appreciation of dignity of work, appreciation of the value of world of work and promotion of technical was one of the main objectives of education according to this Commission (Four Authors, 1984).

The Education Commission 1964-66 under the chairmanship of Prof. D. S. Kothari made substantial recommendations for a rational pattern of education in India and the introduction of vocational education. The Commission reviewed the entire system of education from primary level to higher education. The Commission recommended that the secondary education should be governed by the need for trained man power and, therefore, it is essential to vocationalised secondary education. The secondary education would be terminal (final) for those who, after successful completion of course want to earn a living and enter the world of work. It will also be a preparatory stage for those who want to continue their studies. University Education is not necessary for most of the occupation and some jobs can be performed by well trained higher secondary students. Therefore, the Commission suggested a uniform pattern of 10+2+3 which means 10 years of general education, plus 2 years of education with vocational bias at the higher secondary level and 3 years of degree course in colleges. The Commission envisaged that about 50 percent of the students at the plus two stages would be covered by Vocational Education Programme over a period of 20 years (Sharma & Sharma, 2006).

The Parliamentary Resolution on National Policy of Education, 1968 was considered as the follow up programme of the Kothari Education Commission. The demand was met for laying down and implementing a National Policy on Education which envisaged certain common objectives, and common programme for educational development in the country as a whole. Regarding secondary education it felt the need of extending and enlarging the facilities of secondary education which have been denied in the past. To meet the requirement of the developing economy and real employment opportunities, facilities for technical and vocational education should be suitably diversified to cover a large number of field. (Four Author, 1984).

The Central Advisory Board of Education (CABE-1975), at its 38th meeting in November 1975 approved the 10+2+3 pattern of education and repeated that the +2 stage of education should be a period of preparing a school leaver for different vocations in life and notsimply as a college preparatory. The CABE entrusted NCERT to help the State Government and prepare curricula in implementing vocational education. (Sharma, 2004).

Higher Secondary Education and its Vocationalisation-(NCERT-1976) document was presented to the country setting out a model conceptual for implementation. The document proved to be a useful blue-print and a practical guide to all States in restructuring Higher Secondary Education and implementing Vocational Education. It presented a balanced and coherent picture of what had to be done in the early stages. It was a model significant recommendation related to flexibility, semesterization, nature of courses, change over from one stream to another, time allocation and evaluation of courses. The VEP at higher secondary stage was initiated in 1976 (Sharma, 1994).

The Report of the Working Group (1977-78), under the Chairmanship of Thiru P. Sabanayagam, Secretary to Government of India, Ministry of Education and Social Welfare recommended the structured of Vocationalisation of Education so as to make it both terminal and continuing apprenticeship training, guidance and counselling and that recruitment policies be reformed to absorb vocationally qualified persons increasingly. The group also recommended the setting up of a National Council of Vocational Education and Training with corresponding State Councils (Palanivel, n.d.).

The National Review Committee Report (1978), appointed by the Government of India in October 1977 under the Chairmanship of Dr. Malcolm S. Adiseshiah, Vice-Chancellor of Madras University and formerly UNESCO Deputy-Director-General, Paris, recommended to review the proposals drawn up by the NCERT for Vocationalisation of Secondary Education and suggest modifications: to study the courses and syllabi of Central Board of School Education and a few State Boards with special reference to a few selected vocations, to recommend suitable syllabi and to advise a plan of action for introduction of vocationalisation at the secondary and higher secondary stage (Four Authors, 1984).

The Approach to the Seventh Five Year Plan of the Planning Commission, 1984 related to Secondary Education state that many of the courses lack purpose and relevance and require re-structuring, linking them to the economy's need for skilled man power and vocational skills. Such courses will need to be evolved and introduced in close collaboration with industry and other uses. Excessive pressures or expansion of higher and general education need to be eased by making vocational and technical courses far more relevant and attractive through strong links with industry. This would generate ready employment opportunities (GOI, 1984).

Report of the National Working Group (constituted by All India Council for Technical Education on Vocationalisation of Education) 1985 under the Chairmanship of Dr. V.C. Kulandaiswamy recommended that the Central Government should be responsible for policy guidelines, co-ordination and standardisation, provide guidelines for curriculum development and liberal financial assistance to achieve the target. The group also recommended that the term Vocational Education may be used in a broad sense to cover all educational programmes that aim at job orientation and develop in individual knowledge and skills. The dominant section of the labour force in the unorganised sector must be helped to significantly improve its performance and increase its productivity. Programmes of vocational education and training must contribute to the development (Palanivel, n.d)

The National Policy on Education (1986) gave an elaborate policy statement on the vocational Education programme which states that an introduction of a methodical and meticulously implemented programme of vocational education is vital in the anticipated reconstruction of education. These essentials are meant to build up a healthy outlook among students in relation to their work and life, to foster individual employability, to cut disparity between the need and deliverance of skilled manpower, and to provide an alternative for those pursuing higher education without particular interest of purpose.

Vocational Education will also be a discrete stream meant to train students for identified occupations spanning a number of areas of activity. These courses are normally intended to be provided after the secondary stage, but with a bendable nature, they may also be made available after class VIII. Non-formal, flexible and

need-based vocational programmes will also be made accessible to the new literates, youngsters who have concluded primary education, school drop-outs, persons occupied in work and without jobs or partially in employment. Special attention in this regard will be given to women (GOI, 1998).

The target of the Vocational Education Programme was set to cover 10 per cent of higher secondary students by 1990 and 25 per cent by 1995. Later on it was revised to 10 percent by 2000. Step will be taken to see that a substantial majority of the products of the vocational courses are absorbed by wage or self employment. Review of the courses offered would be regularly undertaken. The government will also review its recruitment policy to encourage diversification at the secondary level.

The Scheme of Vocationalisation of Secondary Education (initially introduced in 1988, revised 1993) in view of the earlier recommendations, the need for significant Central role in promoting vocationalisation was accepted. Accordingly a Scheme of Vocationalisation of Secondary Education was launched in February 1988 under Centrally Sponsored Scheme (Palanivel, A., n.d.). The objectives of the scheme were: (i) to offer an array of educational opportunities in order to promote the employability of individuals; (ii) to lessen the variance between requirement and deliverance of skilled human resource, and (iii) to offer a substitute for those vying for higher education. Under the scheme vocational courses are provided for 2 years duration after secondary stage in general schools (GOI, n.d.) The Scheme will provide assistance to the State Governments /UTs and Non-government Organisations as per the approved plan and the pattern of assistance will be as per the Scheme. The implementing agency will be the State Department of Education (Vocational Education). The NGOs and the Voluntary Organisations would be given financial assistance for innovation and for conducting the Vocational Education Programme. After the introduction of CSS, many States/UTs came forward and expanded the VEP in their respective States/UTs (Palanivel, n.d.).

The Revised Programme of Action 1992 had made certain revision in connection with Vocationalisation of Secondary Education which was implemented in 1988. It suggested establishment of Education- Employment linkages, providing adequate infrastructure, extend supply of fund for a period of 5-10 years, training for

both pre-service and in-service, active cooperation of Government department with Department of Education at the Central and State Levels, etc. (Mohanty, 2003)

Conference of the State Education Secretaries held on 6th January 2012 pointed out some salient features for the Revised Scheme of Vocationalisation of Secondary Education. Some new features were- vocationalisation of vocational education to be implemented in Class XI-XII, establishment of 100 new vocational education schools, setting of a Vocational Education Cell in CBSE, a strong partnership with the employers in all activities right from selection of courses, assessment, certification, strengthening of 1000 existing vocational education schools, etc. (Conference of the State Education Secretaries, 2012).

As of September 2011, 'Vocationalisation of Higher Secondary Education', the Centrally Sponsored Scheme was revised. There was a deficiency of regular teachers and their training, poor linkage in industry, unavailability of separate management structures, and inadequate allocation of finances, etc. in the evaluative studies of the first implementation scheme of 1988. Due to these reasons and to meet the urgent need of the high skilled human resource to sustain the high growth rate of Indian economy and increasing demands from various segments of population for job-oriented education revision of the scheme is needed.

The revised Vocationalisation of Higher Secondary Education has been renamed as 'Vocationalisation of Secondary and Higher Secondary Education' on 1st April, 2013. This Scheme has been subsumed under the Rashtriya Madhyamik Shiksha Abhiyan scheme. The major changes in this scheme are introduction of Vocational Education from Class IX onwards. 7:25 sharing pattern between Centre and States except North Eastern States including Sikkim whose sharing pattern will be 90:10. Financial provision for Innovative Programmes under vocational education, financial costs for engaging with Sector Skill Council for assessment, certification and training, performance linked incentive to Govt. Aided and recognised, unaided private schools (GOI, 2014a).

On 12th February, 2014 the Centrally Sponsored Scheme of Vocationalisation of Secondary Education approved by the Government in September 2011 has been revised with a view to align it with the National Skill Qualification Frame work into

which the NVEQF has been assimilated issued by the Ministry on 22nd Sept 2012. The Scheme covered vocational education starting from Class IX to Class XII (GOI, 2014b).

In different Commissions, the objectives of secondary education related to vocational education were also highlighted as follows:

1) Objectives of Secondary Education related to vocational education according to Iswarbhai Patel Commission (1977)

a) Acquisition of the skills and habits of self-learning
b) Acquisition of a broad based general education consisting of science, mathematics, social sciences, languages and socially useful productive labour.
c) Developing aesthetic appreciation and creativity through participation in artistic activities.
d) Exploring the world of work and understanding the realities of life in order to prepare for a confident entry into the world outside the school.

2) Objectives of Secondary Education related to vocational education according to Secondary Education Commission (1952-53): Improvement of Vocational Efficiency:

a) Appreciation of dignity of work
b) Appreciation of the value of world of work
c) Promotion of technical skill

3) Objectives of Secondary Education related to vocational education according to the Indian Education Commission (1964-66): The Indian Education Commission (1966) pointed out that vocationalisation can bring education into closer relationship with productivity. It also recommended to give a strong vocational bias to secondary education and to increase the emphasis on agricultural and technological education at university. Science education and work experience should be introduced as integral part of all education. Secondary education should be largely vocationalized.

4) Objectives of Secondary Education related to vocational education according to National Policy on Education 1986: The National Policy on Education (1986) and its revised formulations gave stress on the introduction of a logical, organised and

well thought out programmes of vocational education. The following are the main aims:

a) To develop a hale and hearty mind-set among students towards work and life.
b) To improve the employability of individuals
c) To lessen the disparity between the requirement and provision of skilled man-power.
d) To provide an option for those meaning to pursue higher education without specific concern or rationale
e) To prepare students for identified vocations spanning several area of activity.
f) An emphasized in vocational education will also be on development of attitudes, knowledge, and skills for entrepreneurship and self-employment.
g) To provide opportunities to fulfil the needs of women, rural and tribal students and the deprived sections of society
h) To offer scope for professional augmentation, career advancement and tangential entry into courses of general, technical and professional education through fitting bridge courses (Swain,1998).

1.3 Vocational Education in Mizoram

The State Level Committee known as State Council of Vocational Education (SCVE) constituted under the chairmanship of the Chief Secretary of the State is responsible for periodic review of the program implementation. As SCERT was under the School Education Department at that time, it was given the responsibility to look after the Scheme by setting up a separate wing of State Institute of Vocational Education (SIVE) at the SCERT.

In Mizoram, the first phase of Vocationalisation of Secondary Education was implemented in the year 1988. Here four schools were selected in which two vocational trades were introduced. Repair and Maintenance of Television and Radio Receivers were introduced in two schools, and Steno Typing in four schools. But these trades were discontinued due to unavailability of fund for salary and qualified teachers except for two schools where Steno Typing is still continued. The four schools were:

1. Govt. Mizo Higher Secondary School, Aizawl.

2. Govt. Higher Secondary School, Lunglei
3. Govt G.M Higher Secondary School, Champhai
4. Govt. Higher Secondary School, Saiha (SCERT, 2006).

The second phase was implemented in 2002 in which one vocational trade- Computer Technique was introduced in three selected higher secondary schools.

In the third phase implemented in 2007, eight vocational trades were selected in sixteen selected higher secondary schools. These trades were Horticulture in 3 schools, Commercial Garment Design and Making in 3 schools, Automobile Engineering Technology in 6 schools, Medical Laboratory Technician in 2 schools, Computer Technique in 5 schools, and Computer Hardware Maintenance in 2 schools and Office Secretaryship in 1 school (SCERT, 2008).

In 2009, the number of schools offering vocational courses rose to 27 schools, but the number decreased to 16 schools in 2010 (SCERT, 2010). In 2011 one private school dropped vocational course so there were 15 schools offering vocational courses (SCERT, 2012). Again in 2015, one school from Kolasib district stopped offering vocational courses and the remaining schools were 14 (SCERT, 2016).

State Council of Educational Research and Training has conducted several programmes and activities for vocational education. Important programmes and activities organised so far are:

1. Training for Principal, HSS Vocational Stream from 23-25 April, 2009
2. Training for Teacher, HSS Vocational Stream on 19th October, 2009
3. Training for Work Experience Teachers from 27-29 October, 2009
4. Training for Career Guidance for Vocationalisation from 10-14 October, 2009 (SCERT, 2009).
5. Free medical check-up at Helen Lowry and Baptist HSS (schools offering MLT trade) during 2011
6. Study tour to Guwahati for Sericulture students during 2011 (SCERT, 2011).
7. Awareness Campaign of Vocational Education from 26-27 June, 2012
8. Vocational Awareness Campaign from 22-23 August, 2012
9. Awareness Campaign on Vocational Education from 7-8 November, 2012
10. Workshop on tabulation of survey report from 19-23 November, 2012

11. Workshop for interpretation of survey data on NVEQF from 20-30 November, 2012 (SCERT, 2012).
12. Workshop to prepare questionnaire for Survey on Demand of Potential Employers under VSE from 17-18 January, 2013
13. Review Survey Work on NVEQF on 8th February, 2013
14. Career Conference at Serchhip on 19th June, 2013
15. Career Awareness at Sihphir on 4th September, 2013
16. Career Awareness at Champhai in December, 2013. (SCERT, 2013)
17. Career Conference at Champhai in December, 2014 (SCERT, 2014)
18. Career Awareness at Serchhip on 19th June, 2015
19. Career Awareness at Sihphhir on 4th Sept, 2015 (SCERT, 2015).

According to the Economic Survey Report 2016, the total number of higher secondary schools in Mizoram as per 2014 data and the number and percentage of Higher Secondary School (HSS) offering vocational courses are given in the following table:

Table 1.3.1: No. of HSS offering vocational courses

No. HSS (2014)	No. of HSS offering Vocational Courses (2014)	% of HSS offering Vocational Courses
132	14	10.61

The following table depicts enrollment data in various Higher Secondary School (HSS) in Mizoram:

Table 1.3.2: No. of students' enrollment in HSS

No. of Enrollment (2014)	No. of Enrollment in Vocational Course (2014)	% of Enrollment of Vocational Course
22562	777	3.44

There were 22562 students enrolled in Higher Secondary Schools in 2014 according to the Economic Survey Report 2016. The number of students enrolled in vocational courses in 2014 was 777. The percentages of vocational students is 3.44 as shown in the below table.

Out of a total of 132 Higher Secondary Schools, 81 higher secondary schools are affiliated to Mizoram Board of School Education. The district wise distribution of affiliated higher secondary schools and higher secondary schools offering vocational courses are shown in the table given below:

Table 1.3.3 : District wise distribution of HSS

Number	District							
	Aizawl	**Lunglei**	**Kolasib**	**Mamit**	**Serchhip**	**Chhamphai**	**Lawngtlai**	**Saiha**
No. of HSS	34	14	4	3	5	13	5	3
No. of HSS offering Vocational course	8	1	0	0	1	1	0	1

The above table shows the number of higher secondary schools in different districts and the number of higher secondary schools offering vocational courses. Aizawl district has the highest number of higher secondary schools offering vocational courses while in Kolasib, Mamit and Lawngtlai districts, there are no higher secondary schools offering vocational courses.

The criteria for selection of vocational schools in Mizoram are as follows:

1. Permission/Provisional permission from Mizoram Board of School Education to open plus two stages.
2. Satisfactory plus two results for the last three years.
3. Government building/own building, not a rented building.
4. Accessibility of the school premises from the main road.
5. Provision of sufficient water and electricity in the school.
6. Suitability of the school compound for doing practical works.
7. Interest and willingness of the concerned Principal and Teaching staff.
8. Willingness to provide at least 3 extra rooms for introducing a single trade.
9. Willingness to provide teachers for English, General Foundation Course and Mathematics if necessary.
10. Availability of student feeders in the locality.

For the recruitment of teachers in different vocational courses, the following are the educational qualification required for each course:

Table 1.3.4: Required qualifications for vocational teachers

Required Qualifications for Vocational Teachers		
S.No.	**Name of Trade**	**Required Qualification**
1	Auto-mobile Engineering Technology	B.E (Mechanic/ Automobile)/ Diploma in Mechanical/ Automobile Engineering with 2 years experience
2	Computer Technique	Master degree in Computer Science/ Computer Application or B.E./ B.Tech in Computer Diploma in Computer Science/Application with 3 years teaching/ Industrial experience
3	Computer Software Application	Master degree in Computer Science/ Computer Application or B.E./ B.Tech in Computer Diploma in Computer Science/Application with 3 years teaching/ Industrial experience
4	Commercial Garment Design and Making	Master degree in Science (Home Science) with specialization on clothing & Textile with a diploma in Fashion Technology/ Dress Designing & Making
5	Horticulture	Master degree in Science (Horticulture)/ Master degree in Science (Agriculture)/ Bachelor of Science (Horticulture) with 3 years experience in Horticulture
6	Medical Laboratory Technician	MBBS or Master of Science in MLT/Life Science/ Zoology/ Physiology/ Biochemistry/ Microbiology Molecular/ Biology/ Biophysics/ Molecular Technology/ Biotechnology with minimum 1st Class
7	Office Secretaryship	Master of Commerce with experience in MOP/ Post Graduate Degree in MOP
8	Sericulture	Master degree in Science (Sericulture)/ Bachelor of Science (Botany/Zoology with PGD in Sericulture)

(SCERT, n.d.).

1.4 Rationale of the Study

Skilled and technically trained people are the principal of any developing society. Their potential, number and development are the key not only to the wealth producing capacity of the nation but also to its social development. Helping an individual to prepare for a new stage of life becomes an imperative task for the welfare of the state. The government can prepare the youth for the economic and

social needs of the community expressed in terms of various occupations through vocational education (Rashtriya, 2008).

In spite of the importance attached to vocational education, vocational education has not been a popular topic of research due to various reasons including lack of awareness about vocational education. It may be observed that research in vocational and technical education was undertaken only from 1960 onwards. So far 184 studies have been reported till the year 2000. The National Council of Educational Research and Training (NCERT), Pandit Sunderlal Sharma Central Institute of Vocational Education, Departments of Education of Universities, Institutes of Advance Studies in Education, State Council of Educational Research and Training, State Institute of Vocational Education, and Directorate of Education are the ones that have conducted researches in Vocational Education. Ministry of Human Resource Development and Planning Commission also sponsor external agencies to conduct research on their behalf.

The National Policy on Education and Programme of Action (1986, 1992) gave a new impetus to a vocational education at the higher secondary stage and emphasized the need for pre-vocational education at the secondary stage of education. A centrally sponsored scheme of Vocationalisation of Secondary Education was launched in February 1988 for providing support to Vocational Education Programme (GOI, 1998). Operations Research Group (ORG) conducted a systematic study on the implementation of the Centrally Sponsored Scheme in 1996. It highlighted that the programme was suffering because of lack of suitable management structures at various levels, non-availability of trained vocational teachers and lack of collaborating agencies and poor implementation of Apprentices Act (ORG, 1996).

It has been three decades since the implementation of Vocationalisation of Secondary Schools in Mizoram but still no research has yet been conducted. Other states have conducted evaluative studies of vocational courses to find out the weaknesses and strong points of the programme. To identify the problems and to suggest measures for improvement of vocational education in Mizoram, an intensive research needs to be undertaken.

As per annual report 2013-2014 of SCERT, Mizoram, there are fourteen higher secondary schools in the state offering different vocational subjects such as

horticulture, commercial garment design and making, automobile engineering technology, medical laboratory technician, computer software application, computer technique, computer hardware maintenance, and office secretaryship. In this regard, there are many questions that arise in the mind of the investigator, the answers of which could be obtained only through research. These questions are:

1) What is the present status of vocational education in the state?
2) Are the infrastructure and physical facilities adequate for running these courses?
3) Do the up-gradation and maintenance of these facilities draw the attention of the concerned department?
4) What is the admission procedure?
5) Are text books available in the local market or they have to be purchased from other states?
6) What methods of teaching are employed?
7) What are the procedures of evaluation and examination?
8) Do the courses offered have a good potential job placement?

The answers to these questions will reveal the status of vocational education in the state, which will enable the authority to do something for the improvement.

The vocational courses at higher secondary stage are to be regarded as a preparation of an increasingly large number of school leavers for different vocations in life.

1) Who are the beneficiaries?
2) What background do they come from?
3) What problems are being faced by them?

These are the vital questions to understand the students served by vocational courses offered in higher secondary schools in Mizoram. As quality of education depends to a great extent on the quality of the teachers it is imperative that teachers of vocational courses are qualified and properly trained. Important questions in this regard are:

1) What educational qualifications and degrees do the teachers have?
2) Have they undergone training?
3) What experiences do they have?

4) What problems do they face?

Perceptions of parents, teachers and students about the courses offered, the implementation and other related issues are expected to help the investigator to come up with suggestions for a bright prospect of vocational education in the state.

1) What thus are their perceptions?
2) What suggestions do they have for improvement of vocational education in the state?

To get satisfactory answers to all these questions, an empirical study is required.

1.5 Statement of the Problem

To address the questions raised in the preceding section and also to fill the research gaps, the proposed research problem was formulated as below:

Vocational Education at Higher Secondary Stage of Education in Mizoram: Status, Problems and Prospects.

1.6 Objectives of the Study

1) To study the status of vocational education at the Higher Secondary stage of education in Mizoram with reference to:
   a) Courses offered.
   b) Admission procedure.
   c) Infrastructural facilities
   d) Methods of imparting the skills.
   e) Procedure of evaluation.

2) To analyze the background of students offering vocational subjects in Higher Secondary Schools in Mizoram.

3) To analyze the background of teachers teaching vocational subjects in Higher Secondary Schools in Mizoram.

4) To find out the problems faced by students and teachers in vocational stream of Higher Secondary Schools in Mizoram.

5) To study the perceptions of parents, teachers, and students about the prospect of vocational education in Higher Secondary Schools in Mizoram.

6) To suggest measures for improvement of vocational education at Higher Secondary stage of education in Mizoram.

1.7 Operational Definitions of the Terms Used

1) ***Vocational Education*****:** Vocational Education refers to Education designed to prepare skilled personnel at lower levels of qualification for one or a group of occupations, trades or jobs.

Vocational education at higher secondary level includes general education, practical training for the development of skills required by chosen occupation and related theory. The proportions of these components may vary considerably but the emphasis is on practical training.

2) ***Higher secondary school*****:** It implies the stage of education that comprises of classes XI and XII

3) ***Status*****:** The term 'status' in the proposed study means the present position or existing condition.

4) ***Problem*****:** Problem refers to a situation, person or thing that needs attention and needs to be dealt with or solved.

5) ***Prospects*****:** The term 'prospects' means the possibilities that something better may happen in the future.

1.8 Organisation of the Report

The report of the study has been divided into five chapters to facilitate a systematic presentation:

Chapter 1 is introductory, giving concept and significance of vocational education, and brief historical development of vocational education in India and Mizoram state. Besides, rationale and objectives of the study, statement of the problem, operational definitions of the terms used and delimitation of the study are presented.

Chapter II deals with the review of related studies. The studies reviewed are presented under the heads of the status of vocational education, problems on vocational education and perception about vocational education.

Chapter III describes the methodology and procedure adopted for the present study. The method of study, population and sample, constructions of tools, collection, tabulation and statistical treatment of data are described in this chapter.

In Chapter IV, the analysis and interpretation of data regarding the status, problems and prospects of vocational education at the higher secondary stage of education in Mizoram are presented under different heads based on the objectives of the study.

Chapter V is the concluding chapter which presents the major findings, discussion, implications of the study, recommendations for improvement of vocational education as well as suggestions for further research.

REFERENCE

Aggarwal, J.C. & Aggarwal, S.P. (1992). *Educational planning in India: With a slant to educational financing & administrations*. New Delhi: Concept Publishing Company. pp. 28-30.

Biswas, I. (2008), Vocational education in India. *India Science and Technology.* Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract _id =1473 900.

Chaube, S.P. (2010). *Problems of Indian education.* Agra, Agrawal Publications. pp 233-235.

Commager, H.S. (2017). *School education system in India before and after independence.* Retrieved from http://shodhganga.inflibnet.ac.in/bitstream/ 10603/69112/5/chapter%203.pdf.

Conference of the State Education Secretaries. (2012). *Vocational education in secondary education*. Retrieved from http://mhrd.gov.in/sites/upload_files/ mhrd/files/document-reports/Annexure-15%20%28SE%29%20% 28VE%29.pdf..

Edufocus (2017). *The Secondary Education Commission 1952*. Retrieved from https://edufocus.blodspot.in/2017/04/the-secondary-education-commis sion.html.

Four Authors. (1984). *History of Indian education and its contemporary problems with special reference to national development.* Delhi: Doaba House.

Government of India, MHRD. (1998). *National Policy on Education, 1986 (Modified 1992).* Retrieved from http://mhrd.gov.in/sites/upload_files/mhrd/files/ document-reports/NPE86-mod92.pdf.

Government of India, MHRD. (2014b). G*uidelines for vocationalisation of secondary and higher secondary education*. Retrieved from http://rmsaindia.gov.in/images/Vocationalisation.pdf.

Government of India, Planning Commission. (1984). *The approach to the seventh five year plan.* Retrieved from http://planningcommission.nic.in/reports/ publications/approch_seventh_five.pdf.

Government of India. (2014a). *Revision of the scheme of vocationalisation of higher secondary education.* New Delhi: Ministry of Human Resource Development. Department of School Education & Literacy. Retrieved from

http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/REVISED-SCHEME-VHSE.pdf.

Government of Mizoram, Directorate of School Education. *Economic Survey Report 2016-17*. Retrieved fromhttps://schooleducation.mizoram.gov.in/page/ Economic-survey-report-2016-17.

KKHSOU, (n.d.). *Introduction to the Sargent report on education, 1944*. Retrieved from http://www.kkhsou.in/main/education/sargent_report.html.

Maheshwari. V.K., (2012a). Education in Buddhist period in India. Retrieved from Rhttp://www.vkmaheshwari.com/WP/?p=522.

Maheshwari. V.K., (2012b). Education during medieval period in India. Retrieved from http://www.vkmaheshwari.com/WP/?p=512.

Mohankumar, V. (2008). The need for vocational education: Changing economic and labour market scenario. *Indian Journal of Adult Education.* 69 (3), 70 91.

Mohanty, J. (2003). *Current trends in higher education.* New Delhi: Deep and Deep Publications Pvt. Ltd. Pp. 299- 305.

Palanivel, A. (n.d). *Status of vocational passouts of business and commerce based vocational courses in India. A research report*. New Delhi: Central Institute of Vocational Education, NCERT. pp. 1-4.

Pilz, M. (n.d). India: Preparation for the world of work: education system and school to work transition. Springer. p190. Retrieved from https://books.google.co.in.

Rashtriya, T. (2008). *Vocational Education.* New Delhi: APH Publishing Corporation. p26.

Sachet. A. K. (2007). Vocational Education. *Sixth Survey of Research in Education 1993-2000,* Vol. 2, New Delhi: NCERT. pp 129, 130.

Saini, K.S., (1980). *Development of education in India socio-economic and political perspectives.* New Delhi:Cosmo publications. pp. 109-116.

SCERT, (n,d.) Vocationalisation of Secondary Education. Handout. Unpublished.

Sharma, R. (2004). *Vocationalization of education: Facilitators and distractors.* New Delhi: Northern Book Centre. p 4.

Sharma, R.N. & Sharma, R.K. (2006). *Problems of education in India*:New Delhi: Atlantic Publishers & Distributors. pp. 213-220.

Sharma, S.R. (1994). *Vocational education and training: History, methodology, issues and perspective.* New Delhi, Mital Publications. p 208. Retrieved from https://books.google.co.in.

Shodhganga (n.d). History of vocational education in India. Retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/142585/11/11_chapter%204.pdf.

State Council of Educational Research & Training, Mizoram. (2006). *Annual report 2006-2006.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2007). *Annual report 2006-2007.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2008). *Annual report 2007-2008.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2009). *Annual report 2008-2009.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2010). *Annual report 2009-2010.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2011). *Annual report 2010 -2011.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2012). *Annual report 2011-2012.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2013). *Annual report 2012-2013.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2014). *Annual report 2013 -2014.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2015). *Annual report 2014-2015.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2016). *Annual report 2015-2016.* Aizawl: Author.

Swain, S.K. (1998). *Trends and Issues in Indian Education.* Delhi: Kalyani Publishers. *pp. 2.4-2.5,*

CHAPTER II

REVIEW OF RELATED STUDIES

CHAPTER II
REVIEW OF RELATED STUDIES

The Survey of Research in Education which is very important for researchers, academicians, planners and policy makers, etc was initiated by Late. Prof. M. B. Buch and Late. Prof. B. K. Passi. This includes abstracts of the doctoral and post-doctoral studies and major research projects. The first survey (1943-72) was compiled and published by The Maharaja Sayajirao University of Barodo, Vadodara, Gujarat and the last sixth survey (1993-2000) was compiled and published by NCERT in 2007 (Division of Educational Research, NCERT n.d). When one examines all these first to sixth surveys so far published by NCERT, one can observe that researches in vocational and technical education have been undertaken only from 1960 onwards. Researches in technical and vocational education were clubbed by NCERT as they were close to each other. The studies gathered momentum after 1970 and stabilised after 1980.The fifth and sixth surveys of educational research presented the decadal progress of research in technical and vocational education as below:

Table 2.1: No. of research in vocational and technical education

Year	1959 and before	1960-1969	1970-1979	1980-1986	1988	1989	1990	1991	1992	1992-2000	2001-2018
No. of Studies	Nil	9	41	45	18	6	19	9	9	8+19	8

Note: In 1992-2000, 8 studies were in the area of work experience.

There were 184 studies related to technical and vocational education between 1943 and 2000. The Division of Educational Research, NCERT has now decided to conduct the activity of survey of research through online mode. Researchers upload their own research studies as well as studies conducted by others. If one examines the research uploaded in this website, there were only 8 studies related to vocational education till May, 2018. The number of studies in the field of vocational education has been decreasing.

Besides Survey of Educational Research, print journals, e-journals, e-books, books, and other internet sources were consulted. A number of studies in the field of

vocational education conducted in India and abroad were reviewed but there were only few topics related to the present studies. Review of related studies is presented under the following heads:

1. Status of Vocational Education.
2. Problems in Vocational Education.
3. Perceptions about Vocational Education.

2.1 Status of Vocational Education

In this category, research studies and literature related to the status of vocational education have been reviewed. It is evident from the findings of the various studies and literature that the status of vocational is unsatisfactory. The various studies reveal that most of the technical education systems in various countries need reformation.

Thrasia (1983) performed a comparative study of the national school system of the USA , UK and India with a view to suggest measures for promoting a better pattern of vocation based common system of public education to suit the needs and aspiration of Indian society. The study revealed that the latest concern of educationist and practising teachers is in confronting the need of the present US society. The British school system upheld the teacher's freedom to teach, to choose his own subject matter and to organize it. The experts were of the opinion that movement from black board to computer –assisted instruction was a movement in degree rather than in kind. Indian schools had been a place where information trading dominated. This had killed the joy of learning, reducing children's work to memorization. In the USA and UK, school was not a place to impart literacy but to provide certain skills to the child at each stage of development. This is significant for the Indian set-up also. The +2 curriculum in the Indian set-up had to be flexible .The period of attaining proficiency in vocational courses had to vary from two years to four years, depending upon the requirement of the vocation. The CSSPE institution would conduct activities which might include drama, debate, essay, music, drawing, painting, subject-wise clubs, sports, yoga, etc.

Gokhale (1984) performed a study of vocationalization at +2 Stages (Commerce Stream). The findings of the study were - the presently run vocational courses were useful as compared to general courses, but failed to prepare a student for

any job or self-employment venture. The government was not providing any job or financial assistance to the students passing out with vocational courses. The practical training imparted by visits to different institutions and by arranging guest lectures was not sufficient. The service conditions of teachers teaching vocational subject were such that they kept good teachers away from these subjects. The grants provided by government were insufficient for imparting practical training.

Reddy (1984) conducted a survey of the existing vocationalisation of school education in Andhra Pradesh. The main findings were nearly fifty per cent of students dropped out at various stages between the sixth and tenth classes. The chances of introducing vocationalization were only possible from classes VIII to X. The state-wide percentage of passes at the SSC public examination in 1983 was found 50. Socially useful productive work as conceived in schools as work-oriented educational activity contributing towards the total development of the learner's personality. The revised curriculum had been introduced in all schools in the state the in a phased manner from the session 1979-80 onwards. In the implementation of the socially useful productive work programme in schools the problems encountered included non-availability of specialized teachers, inadequate physical and infrastructural facilities, non-supply of copies of syllabus, non-availability of funds and absence of guidelines for the disposal of finished products produced in the socially useful productive work programme.

Soundaravalli (1984) performed a critical study of the functioning of the vocational education stream in higher secondary schools in Tamil Nadu. He found that the students were admitted in the vocational education stream without any aptitude test. As a result of the introduction of a vocational stream in higher secondary schools, many teachers were appointed to teach the vocational subjects to the students, but only 20 per cent of the teachers were full-time teachers. Adequate cooperation from industrialists and factory owners was not available. The instructional materials pertaining to curriculum was not adequate in 50 per cent of the schools. Only 30 percent of the schools were fully equipped. Though the aim of introducing vocational education was to reduce unemployment and pressure on colleges, yet nearly 37 per cent of the vocational group students went in for higher studies only. The vocational group students, the teachers teaching vocational subjects,

and the parents of vocational group students showed a favourable attitude towards vocational education.

Advant (1985) performed a case study on an evaluation of vocational courses introduced at the +2 Level in Marathwada. The main conclusions of the study were: The maximum number of institutions which introduced vocational education was in Aurangabad district. Teacher teaching vocational subject needed orientation. The government did some orientation in collaboration with the NCERT during the first years; however, neither long-term nor short-term training was subsequently given. By and large, colleges reported that there was no dearth of teachers. However, during 1978-79, when the whole scheme was introduced, enough teachers were not available. In subsequent years the Maharastra government prescribed minimum qualifications and experience for teachers and assistants following which junior colleges could appoint such personnel.

CASE (1985) carried out a study on vocationalisation of education at the higher secondary stage MSU (Planning Commission financed). The institutions were mostly situated in urban localities. Being a part of formal institutions like higher secondary schools and colleges, the vocationalisation stream did not get adequate facilities. Most of the students were male in Karnataka and Gujarat. The students of Maharastra and Gujarat were from high and middle class families, whereas in Karnataka most of them belonged to poor families. Most of the teacher has technical education qualifications; however, because of lack of job security and low salary, highly qualified and experienced teachers could not be attracted. Admission was on merit basis. No crush for admission was noted. Practical experience could not be provided to the students appropriately because of lack of funds, lack of transportation and lack of cooperation from teachers.

Gokhale (1985) performed a study of vocationalization of educationat +2 and +3 stages in commerce stream (Maharashtra State). The main findings were- the students in general were of the opinion that these vocational courses were very useful as compared to general education. Visits and guest lectures were also useful, but there was a need of some changes in the present system. The presently run vocational courses at +2 stage would not prepare the student for a job or a self-employment venture. Most of them favoured the proposed specialized vocational courses at the +3

stage. They were for the faculty-wise classification of roles and linking of jobs with education. They were of the view that more weightage should be given to the practical aspect of vocation. The teachers in urban and rural areas were of the view that the presently run courses could hardly prepare a student for job or a self-employment venture. They accepted the usefulness of vocational courses and appreciated the scheme of specialized vocationalization at the +3 stage. A majority of the employers were in favour of linkage of jobs with education through faculty-wise recruitment boards.

Thongplee (1985) comducted a study of non-formal vocational education programme in the Region 5 of Thailand, 1985. The study revealed: A large number of administrators were trained graduates who had completed certificate courses on vocationalisation. A round half of the instructors had completed primary and secondary education along with vocational certificates. All the administrators insisted all the instructors should undergo training programmes on non-formal education. All of them complained about lack of appropriate funds for managing the programmes. The physical facilities were not sufficient for conduct of programmes. The majority of learners joined the courses for better utilization of their leisure, because of interest in the courses and to supplement their income. Different methods of teaching, like seminar-cum-workshop, lecture-cum-demonstration and lectures were followed in the training programmes. It was noticed that most of the graduates had remained unemployed after completion of courses. A significant increase was not witnessed in terms of income of the products.

Mohanty (1986) conducted a survey of vocational education in the state of Orissa since independence (1974-1981). The main findings were- very few schools imparted vocational and technical and education in 1947. By 1971 the total number rose to 106 and 124 in 1981. More men were attracted towards technical and vocational courses than women. There was shortage of skilled personnel and an unemployment problem from 1961 to 1981. No follow-up programme was undertaken. There was no feedback between training institutions and fields of work. There was no placement service wing. Courses in various institutions were need based. Since the employment prospect was bleak, many dropped out.

Sharma (1987) studied the effectiveness of the vocational exploration programme at secondary school level for vocationalisation. The major findings were - the experimental group differed significantly on their pre-test-post-test score comparison, but not the control group. This indicates that the vocational exploration programme was highly significant in attaining its objectives. Both the high and low intelligence groups gained significantly. This indicates that the self-exploratory unit was equally effective for all levels of intelligence, and that the occupational exploration unit needed improvement to be equally effective for subjects of all levels of intelligence.

Balasankar (1988) conducted a study of work experience programme in the schools of Kerala and formulating guidelines for strengthening the programmes. His major findings were: (1) Work Experience/tool practice was prescribed in the schools of Kerala from 1974. (2) Even before 1975, 38% of the high schools offered crafts. (3) In high schools, horticulture and agriculture were favoured while in upper primary schools workshop practice and cardboard work were preferred. (4) Teaching the operating principles and producing goods were the instructional strategies followed by the majority of the schools. (5) 'Earn while you learn' programmes were not offered. (6) Correlation of Work Experience with other subjects was not reported. (7) There was practically no evaluation of the Work Experience programme. (8) The time allocation for Work Experience classes was inadequate. (9) The percentage of students showing interest in Work Experience was low. (10) The attitude of teachers, parents and the public was also not favourable. (11) Financial assistance to the programme was inadequate. (12) Physical facilities for the conduct of the Work Experience programme were poor.

Singh (1988) made an attempt to investigate the status of vocational education in Indian schools and evaluate the various attempts made in this area. Major findings were there was a lack of organisational facilities for the development of vocational education in India. Students lacked proper attitude towards vocational education. The vocational training given was not helpful to students in starting self-employment ventures. The curriculum of vocational the local/regional needs. There was a lack of funds, infrastructure and trained teachers for the implementation of technical education in India.

Subramanian (1990) carried out a study on socio-economic status of students of polytechnics and their attitude towards manual jobs. His major findings were there was a significant relationship between lack of education and manual jobs. Irrespective of educational, social and economic status, the students had a negative attitude towards manual work. There was no significant relationship between personal development and manual jobs.

Vaid and Gupta (1990) conducted a study on a quick appraisal of the implementation of centrally sponsored scheme of vocationalisation of secondary education in the state of Goa. The study found that about 11.2% of all the higher secondary students in the state had been diverted to the vocational stream. No systematic vocational survey was conducted for identifying the vocational courses and the institutions. As against the national recommendation of 70%, the State provided about 62.5% weightage in terms of total time to the teaching of vocational theory and practice. About 62% of the principals/vice principals stated that the practical training given to the students was inadequate. About 74% of the students and teachers reported that the availability of instructional material was inadequate. Though there was no problem with regard to availability of full-time teachers for these courses, some schools experienced difficulty in getting the right type of persons as part-time faculty mainly because of the low rate of remuneration. 76% of teachers had not undergone any specialised training in vocational education. More than 50% of schools had completed the construction of work sheds and purchased the equipment but over 53% of teachers and 80% of the students who were contacted reported that the equipment was not adequate for giving the desired practice. The schools were partially successful in arranging collaboration with neighbouring industry/institutions. About 56% of the students who joined these courses had obtained the Second Division and another 11%, the First Division in their high school examination. There was virtually no effort made in the state to provide vocational guidance to the students.

Verma (1990) undertook a quick appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education in Delhi. He found that 26.12% of the students included in the study obtained the First Division, 53.30% the second Division and 20.38% the Third Division in their qualifying high school examination. Only part-time teachers/professional was engaged to teach the

vocational courses. Vocational surveys were not undertaken. Most of the schools did not have separate classrooms, laboratories, library, facilities, etc. There was a dearth of suitable instructional materials for these courses. Recruitment rules had not been amended in most of the cases. General awareness about the vocational programme was poor among students, teachers, and people at large.

Bhatnagar (1991) conducted a study on the role of industries in promotion of vocational education among rural women: A feasible study in the state of Haryana. He found out that there was lack of adequate training facilities, textbooks, training material, scholarships, systematic training courses and a human resource development.

Dhote (1991) also undertook An On-the-spot study of the implementation of the vocationalisation of education programme in the state of Maharastra. His major findings included lack of suitable instructional materials, inadequacy of the job training, and non recognition of the vocational courses for employment were some of the major lacunae inflicting the programme.

Gupta and Raizada (1991) carried out an on- the spot study of the implementation of vocationalisation of education programme in the state of Karnataka. Lack of efforts in getting all the courses recognized by employing agencies, no self support, lack of general awareness, no provision of desirable further education facilities, poor and discontent among the teacher, non-standardization and accreditation of courses and institutions, etc. were the weak points of the implementation of the programme.

Biswal (1992) evaluated the implementation of the programme of vocationalisation of education at the +2 stage in the State of Himachal Pradesh. His findings were admission to vocational courses was done on the basis of merit, and an increasing trend of enrollment in the vocational stream was noticed from 1988-89 to 1990-91 in the State. The implementation was deficient in terms of infrastructure, teaching and non-teaching staff, funds, proper management system, supervision, need-based curriculum development, publicity, linkage between SUPW activities and vocational courses, coordination and cooperation among various departments, job training facilities, placement facilities, incentives and textbooks. The teaching strategies used by the teachers were largely traditional. There was no special

arrangement to train vocational teachers. Vocational students were not interested in self-employment. Lack of adequate knowledge and understanding of the scheme was noticed among personnel involved in the process of implementation.

Sacheti, *et al.* (1992) made an on-the-spot study of implementation of vocationalisation of education programme in the state of Kerala. The study revealed that the management structure was bifocal, enabling students to either take up a vocation or pursue higher academic or professional education. The majority of the vocational teachers were fresh graduates or postgraduates having no practical experience. Out of the vocational entrants, 16.4% had obtained the first division; 28.9% the second division and the remaining, the third division or pass class in the qualifying public examination. 27.9%, of the parents of these students were engaged in agriculture or farming related occupations while 25.2% were government servants. More practical training, better qualified and trained teachers and reduction in non-vocational subjects were some important suggestions from students.

Swain (1992) undertook a study on the Socially Useful Productive programme at the secondary stage in Himachal Pradesh: An evaluative study. He found out that there were certain weaknesses like untrained teachers, no provision of refresher courses, unavailability of instructional material; lack of financial assistance, no SUPW cell in Himachal Pradesh, SCERT.

Leclereq (1994) in his comparative study of general and vocational education observed that because of the economic crisis and the threat of unemployment which it brings to bear on young people. It has seemed necessary to familiarise them with technological learning and the world of work even while they are engaged in general education. The process has been brought into gear from compulsory schooling onwards, with the introduction of technological instruction included in the curriculum-in France in 1985, in Britain in 1986, in Netherlands in 1989, in Spain in 1990. Today it takes place in the upper secondary school.

Wilson (1994) stated that in Japan and Germany, the cross-training trend, in which skilled workers are trained in both mechanical and Electrical/electronic skill areas for capability in operating and maintaining robotic and computer-controlled equipment is becoming the ‘norm’.

Operation Research Group (1996) undertook an evaluation study of the scheme of vocationalisation of secondary education covering 21 states spread across five zones of the country. The survey indicated that the enrollment has increased by nearly four and half times since 1988-89, but this was largely due to rapid increase in number of schools and vocational sections. The proportionate share of vocational students vis-a-vis total enrollment at the higher secondary stage was only 4.8%, a significant departure from the 10% by 1995 as envisaged in NPE (1986). The position with regard to Project Implementation Structure and inputs of the scheme was not as satisfactory as expected.

On the whole, no priority was accorded to vocational education by states compared to state run programmes. With regard to appointment of vocational teachers, majority of the state governments showed reluctance in appointment of full-time teachers/staff because of the unwillingness to take on a long term committed liability in case of the closure of the scheme. There was large scale transfer or deputation of teachers from the general stream, without adequate considerations given to technical merit. Part-time teachers were largely unemployed graduates. A teacher training was conspicuous by its absence. Very few states conducted vocational surveys. Practical training was poorest in the schools of East and North East zones as they were suffering from lack of basic infrastructural facilities.

Bordia's (2000) study reveals the trend in funding Technical and Vocational Education. He found that during the past decade, funding mechanism for universities and technical education institution and colleges have undergone massive restructuring in developed and developing countries alike. Governmental support has generally decreased, resulting in greater reliance on fee-based education or creation of privately sponsored engineering/technical colleges or universities. The following are some of the trends that will likely result from changes in the funding of technical education: (1) export of education will become an important component of the economics of advanced, rich countries such as Australia, New Zealand, the United Kingdom, and Canada (2) privatisation, commercialisation, and marketing of education, especially business, commerce, and information technology will increasingly play a dominant role in developing countries (3) quality management in developing countries will also move away from government monitoring to professional monitoring, as is now the

case in developed countries (4) the quality of education in developing countries will eventually be determined by market forces (5) educational funding from individual family budgets will become increasingly difficult in developing countries as privatisation results in increased fees and (6) education will move from being a totally governmental activity to amore commerce and industry-based activity and will eventually become a service industry.

Khanale and Vaingankar (2006) performed a study on estimating availability of middle level skilled manpower. In 1992, the NCERT introduces a revised policy and promotes vocational education to meet the demand of middle level skilled manpower required by the economic reform policies being introduce since 1990. He found that by using multiple regression technique it is possible to predict the availability of middle level skilled man power which are useful for Government to make plan for vocational education.

Chakroun (2010) in his article National Qualification Frameworks: From Policy Borrowing to Policy Learning highlighted the complex interaction of the global and local development when introducing National Qualification Framework and the impact of such reforms on vocational education training systems.

Alonzo (2011) conducted a study on an analysis of career and technology education programs in Texas ESC Region One high schools. His study compared the graduation rates of students enrolled in Career and Technology (CTE) programs with those who were not (Non-CTE). The results of his study proved that most of the groups' graduation rates were significantly associated with CTE programs. The group of students who were considered to be Economically Disadvantage was most impacted by CTE programs while the Special Education students were least impacted. His study found Career and Technology programs of the Region one area are well aligned with the work force demand of the same industrial area.

Pilz, *et al.,* (2016) conducted a study on learning for life and/or work: the status quo of pre-vocational education in India, China, Germany and the USA. Their study reveals that though the curriculum design and the means of implementation varies widely from country to country, the teachers in all four countries focus in pre-vocational education on equipping students with life skills.

Tome and Goyal (2015) analyzed the role of human capital, human resource development and vocational education and training in Indian economy and found that it have been growing for India to become developed. There is need to pay attention in human resource and development and in vocational education rather than general education. The government goals for 2022 are immense and the aimed for HRD and VRT are expected to change the India's economy and society.

Agrawal and Agrawal (2017) performed a study on vocational education and training in India; a labour market perspective. They found that two third of the trainees work related to the field of training they have undergone which shows that individuals training is matches to their occupational level. They also found that the relative returns to vocational education are higher than general secondary education.

2.2 Problems in Vocational Education

A review on various researches conducted in vocational education shows that most of the researchers concentrated on the problems of vocational education.

Thimmaiah, *et. al*. (1982) conducted a study on Vocational education-Problems and Prospects (A case study of Karnataka). They found that the shortage skills which were not in demand were produced, infrastructural facilities were found to be adequate and problems arose in selecting the location of colleges, the staff position, the infrastructure facilities, the courses offered, and the employment possibilities after the completion of the training.

Mowji (1983) conducted an Investigation into the educational and vocational problem of higher secondary students of Greater Bombay (1975-1977)-English medium. The main conclusions of the study were- junior colleges students faced educational and vocational problems. They had to face difficulties due to absence of guidance at school and college level. The main purpose of the 10+2+3 was vocationalization; it had completely failed as everybody joined the academic stream in the absence of any vocational stream. Schools and Colleges had not properly trained teachers. They were neither trained before implementing the new pattern nor afterwards. Syllabus and books were prepared without taking into consideration interest and level of the students. Admissions were given more on influence of the parents rather than on merits of the students. Students joined any stream where they

got admission. There was dissatisfaction among the Teachers in the junior colleges due to low salary and more workload.

Lata (1984) undertook a study on teachers, parents and counsellors, approaches towards personal, vocational and educational problems of adolescents. The findings of the study were adolescents as a group had large number of problems. These were related to physical development, physical growth, physiological growth, intellectual development, emotional development, social development and moral development. Parents were not equipped for the role of counselling. They were ignorant about the problems faced by their children. The teachers were also not in a position to identify the problems faced by the students. They were not exposed to any counselling practice either in theory of practice. The adolescents' problems covered personal, educational and vocational fields. With parents and teachers not being in a position to resolve the problem, the adolescent had serious problems facing them. It was only the counsellor who had been able to resolve most of the problems faced by adolescents. The resolution problems had covered all the fields- personal, educational and vocational.

Emmanuel (1990) in his study on Vocationalisation of the +2 stage- A study of some major problems of vocationalisation of education in Andhra Pradesh found out that there was a felt need for vocational education and the Scheme suffered due to dual control in respect of academic and administrative matters.

Gupta and Dhote (1990) undertook a study which addresses the problem of evaluation/appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education in Himachal Pradesh. Their major findings were the fund released by the Central Government under the CSS was not reaching the concerned implementing officers as the State Government had extended its ban on expenditure to central scheme also. No effective collaborative arrangement had been made for providing on-the-job practical training to students. Institutional training in the majority of the cases was utterly inadequate. There was complete dearth of instructional materials as per state needs. There was lack of effective communication between the directorate and the institutions mainly because of the absence of any district level management structure for vocational education. Selection of vocational courses was not based on district vocational survey findings, resulting in a mismatch

between the courses introduced and availability of job opportunities. Computer labs generally were ill-equipped and ill-maintained. The involvement of the Board of Secondary Education was inadequate in the implementation process. There was no provision for on-the-job training in the curriculum. Non- availability of requisite raw materials was seriously hampering the practical work. Not much progress was made in providing apprenticeship training to the vocational pass-outs. Guidance, counselling and placement services had not been made available to the vocational students.

Pillai and Srinivasan (1990) made a survey of problems of technical students. It was found that 52% of the students had difficulty in completing all laboratory/workshop exercises in time. The students also expressed that they were neither fluent in oral nor written communication.

Baraga (1991) studied the interests of the students studying in the vocational education stream in Rajasthan and identified the difficulties faced by them. The study found that the majority of the students were interested in vocational education mainly because of its employment-preparatory nature. Lack of physical facilities, non-availability of trained teachers, non-release of funds in time are some major shortcomings identified.

Joshi (1992) conducted study on vocational achievement and problems faced by students after passing the +2 vocational examinations. The study, which included 72 vocational products of Rajasthan, found that only 12.8% of them were self-employed. The percentage of students obtaining wage employment was also similar. 7.2% were in vocations other than those they had studied. 15.4% were unemployed and 51.6% had opted for higher education. No student could get loans from any agency. A large number of students found the theory portions of the vocational curriculum very difficult. Their practical training was inadequate due to lack of tools, equipment and materials. Even those students getting jobs remained dissatisfied because of inadequate salaries, lack of desired competencies and insecurity of jobs.

PSSCIVE (1999), The Second International Conference on Technical and Vocational Education, was held in Seoul, Republic of Korea in 1999 to identify challenges which TVE is likely to face in view of the changing demands of the

twenty-first century. As prelude to the International Confference and to provide a national perspective to challenges identified by UNESCO,a National Conference on Vocational Eduvation was organised by PSCIVE in April 1999. The challenges identified by UNESCO were:

1) Globalisation-unemployment and employability; emerging market economics; and social and economic development.

2) Improving systems for providing education and training throughout Life-vocational education as an integral part of national education system.

3) Innovating the educational and training process

4) Technical and Vocational Education for all- ensuring equal access for girls and women.

5) Changing roles of Government and other Stakeholders in TVE.

6) Enhancing international cooperation in TVE- scope and orientation for UNESCO's long-term TVE programme; and multilateral partnership for developing TVE.

Palanive, Peter and Richard (2006) undertook a study on A Comparison of Business Graduates' Labour Force Destinations Following Post-Secondary Vocational Education and Training in Three Indian States (i.e., Kerala, Goa and Haryana). The main findings reflected that there was a wider need for policies that ensure buoyant local labour markets, with sufficient and appropriate demand for labour, alongside vocational education and training programme.

Beddia (2009) in his paper Australia and India: Facing the twenty-first century skills challenge explored some of the common challenges the countries faced in reforming their vocational trainings systems.

Martin (2010) conducted a study on instructional alignment of workplace readiness skills in career and technical education. The results showed that while overall teacher scores did not show a statistical significance on overall student scores, there were individual skill areas in which there was a relationship between teacher and student scores.

2.3 Perceptions about Vocational Education

In this category studies on perceptions about vocational education were reviewed. From all the studies consulted so far and among the studies reviewed here in this category, there were only few studies related to perception of teachers and parents.

Choudhury (1990) conducted a study to find out the vocational aspirations, occupational choices and academic choice of students. The majority of the students preferred the science stream for continuing their studies and future career. The study did not find any relationship between the occupation of the fathers and the occupational choices of the students.

Kaur (1990) studied the educational and vocational aspirations of students belonging to different socio-economic locales of Jammu Division. It was found that both educational and vocational aspirations are influenced by sex, socio-economic status, and locality when taken independently. Urban students differed significantly from their rural counterparts in their educational preferences and vocational aspirations. While rural students were found to aspire for high academic degree/a degree in arts, the urban students aspired for high professional degrees/ a degree in science.

Hummel (1990) performed a study on the role of secondary vocational education in the economic development of the building trades industry of Clinton Country. This study investigated the perceptions of employers engaged in the construction of residential structures towards the value of vocational education training centre as a provider of a trained work force pool, and if the availability of such a training facility was considered to be an asset in community economic development. A total of 64 employers responded for 71.1 per cent participation rate.

Sungoh (1991) conducted a study of vocational education and attitude towards vocationalisation of education in East Khasi Hills. He found that there was no significant difference in the attitude towards vocationalisation of education between pre- university male and female students; rural and urban students; commerce and science students; but the difference was significant between tribal and non-tribal students, commerce and arts students, and arts and science students.

Intodia (1993) conducted a study to find out the educational needs of tribal children as perceived by the Parents of Dungapur District of Rajasthan. The study suggested that there was a need for training students in taking care and maintenance of diesel pump, electric motor, soil, testing and reclamation, grain storage, land preparation and improved technique of sowing.

Sundararajan and Sarah (1993) in their studies teachers' attitude towards vocational education in the higher secondary schools in Tamil Nadu examined the relative importance given by the higher secondary students to vocational opportunities. Five hundred sixty students of higher secondary stage from 8 higher secondary schools were randomly selected in Chidambaram District. It was found that the boys and girls did not differ significantly with regard to their preference on three vocations namely the medical, engineering and administration (District Collector). No significant difference was found in respect of first two vocations but significant difference was seen in respect of third vocation, viz. District Collector, In respect of the other categories of students, significant differences in the percentage were found with regard to all the three vocations. There was no association between the gender and most preferred vocations.

Mc Connell (1997) performed an exploratory study of secondary student's career goals in regard to postsecondary education. The findings indicated the advantages and disadvantages of vocational training on the secondary level as well as changes taking place in vocational education. A new perspective on career development and the non-traditional students in the postsecondary arena also surfaced.

Almegren (1997) conducted a study on private sector perception of the vocational educations item in the city of Riyadh, Saudi Arabia. The major findings of his research showed that the respondents' perceptions toward vocational education as a whole were position. However, many respondents felt that the current vocational education programs and curricula were not sufficient to fulfil their work for needs (81.2%), and that they need total reform (85.2%) Respondents emphasized the importance that students of vocational schools about the work place and the system of work and workers and that they should explore various occupation while they are school (81.2%). Respondents believed that students are less experienced, poorly

trained, and that they lack awareness of job requirement discipline, self-confidence and aspiration.

Despite this negative perception of student's attributes respondents were willing to hire vocational school graduates and they thought this process would not cost them more money. The majority of the job sectors are willing to cooperate with vocational education school but it seems that there is little, if any, cooperation.

Psacharopouls (1997) conducted studies in vocational education and training today: challenges and responses. He observed that vocational education and training is perceived throughout the world to be a favoured instrument of social engineering for achieving a series of objectives such as accelerating economic growth, reducing youth unemployment and benefiting from economic globalisation. Many consider it is like building a bridge to lower transportation costs between two sides of a river. Others argue that it is not a panacea for all social ills.

Arora (1998) conducted a pilot study on educational and vocational aspirations of students of Class xii-preparation of an interview schedule. His findings were: (1)The percentage of boys obtaining marks above 75 per cent was greater than that of girls. (2) Out of 19% of the students whose fathers were postgraduates , about per cent obtained marks above 75% out of 10% students whose fathers were professional degree or diploma holders about 1.34% students obtained marks above 75%.(3) None of the boys whose fathers were doctors, engineers or teachers obtained mark less than 45%. (4) 59.39% girls of the science stream belonged to the income group between Rs 10,000 and Rs 20,000, and out of these 31.26% girls aspired to join the medical course. (5) The sex-wide degree of importance of reasons motivating students to pursue higher education was also studied.

Dangi and Intodia (1999) again conducted a study to find out a choice of the youth regarding different agriculture vocations. The study revealed that there was a significant relationship between the groups of tribal and non-tribal educated rural youth in ranking the different areas of agricultural vocation.

Desai and Whiteside (2000) analysed the views of the limited number of graduates from secondary vocational courses who have entered the world of work and reported that commerce and technical courses attract more students. On the question

of socio-economic background of the students and ex-students, it was found that the students from poorer and less privileged background like to enter vocational stream. With regard to variation in choices of course in relation to the income of the family, it was found that lower family income background were over represented in the home science courses, while those with highest Family income backgrounds were not represented in the technical courses. It was found 37% of vocational students come from family background that has reported income below Rs 1500 per month. The study also endorsed the finding of other studies that students from disadvantaged background were over represented in the VEP. On the question of job search, the ex-students reported that the waiting period has been lengthy and difficult. Over has the respondent reported great difficulties in finding a job and a further third reported some difficulties. Conclusion, it confirmed the findings of other states which have shown that the provision of vocational secondary education does not mean that student will automatically get work after completion of a vocational course.

Simeoni (2007) conducted a study on apprenticeship training and co-operative education in British Columbia. The study found out that respondents believed that it is generally quite difficult to find good trades people, were ambivalent about their satisfaction and/or dissatisfaction with traditional apprenticeship system and had an average level of satisfaction with the performance of the apprentices presently employed by them. They were satisfied with the performance of co-op students and graduates of trades' co-op programs in general.

Robert (2008) carried out a study on school to career transitions: career awareness and career and technical education (CTE) students. Results revealed that the environmental variable of socio economic status (SES) was significantly related to career decision self-efficiency (CDSE) and career outcome expectations (COE) scores, but was not related to career planning (CP) scores. Gender and achievement variable of math (probability and statistics) were significantly related to CP scores in the final model of a hierarchical regression analyses. Interestingly, the math variable showed an inverse relationship to CP scores. Factor analysis of the CDSE-SF scale produced results similar to previous studies in that the five subscales of the instrument did not cleanly delineate in the underlying factor structure. However, temporal order was reflected in the factor structure. A factor analysis of the CP scale supported the

time dimension component of distant future, intermediate future, and present as they relate to career planning. Stepwise regression analyses revealed that CDSE and COE were significantly associated to CP attitudes.

2.4. Conclusion

The above reviews reveal that there have been no studies exactly similar in nature to the present one that has been conducted in any part of the country. It is also evident that there are only few researches conducted in the field of vocational education. The dearth of studies in the area of vocational education clearly indicates that this area has only been partly explored. The studies conducted so far do not paint a clear picture of the status of vocational education, especially in the north east region. Besides, not much work seems to have been undertaken to examine the problems encountered by teachers and students of vocational education. Considering the significance of vocational education for the development of our country as well as our state, it is imperative that more studies be conducted on this.

REFERENCES

Advant, S.B. (1985). An evaluation of vocational courses introduced at the +2 level in Marathwada- A case study. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Agrawal, T. (2012). Vocational education and training in India; challenges, status and labour market outcomes. *Journal of Vocational Education and Training:* Vol. 64 (4). Retrieved from https://doi/abs/10.1080/13636820.2012.727851.

Agrawal, T., & Agrawal, A. (2017). Vocational education and training in India: a labour perspective. *Journal of Vocational Education and Training:* Vol. 69 (2). Retrieved from https://www.tandfonline.com/doi/abs/10.1080/13636820.2017.1303785.

Almegren (1997). Private sector perception of the vocational educations item in the city of Riyadh. Saudi Arabia. *Dissertation Abstracts International* Vol. 57 (11). Order Number DA971447.

Alonzo, V.S. (2011).An analysis of career and technology education programs in Texas ESC region one high schools. *Dissertation Abstracts International* Vol. 73 (1). Order Number DA DA343009.

Arora, P.N. (1998). Educational and vocational aspirations of students of Class XII. Preparation of an interview schedule: A pilot study. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Balasankar, P. (1988). A study of work experience programme in the schools of Kerala and formulating guidelines for strengthening the programmes. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Baraga, R. (1991). A study on the interest and difficulties faced by the students studying in vocational education stream. *Fifth Survey of Educational Research 1988-92,* Vol. 1, New Delhi: NCERT.

Beddia F.M. (2009).Austrialia and India: Facing the twenty-first century skills challenge. *ERIC Record Ed507341.*

Bhargava, R. (1991). A study on the interest and difficulties faced by the students studying in the vocational education stream. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Bhatnagar, K.M. (1991). The role of industries in promotion of vocational education among rural women. A feasible study in the state of Haryana. *Fifth Survey of Educational Research 1988-1992*, Vol. II, New Delhi: NCERT.

Biswal, P. (1992). Vocationalisation of education at the +2 stage in Himachal Pradesh: An evaluative study. *Fifth Survey of Educational Research 1988-92*,New Delhi: NCERT.

Bordia, S. (2000). Funding problems of technical education in developing countries, in cross-roads of the new millennium. *Proceedings of the Technological Education and National Development Conference.* Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

CASE (1985). A study of vocationalisation of education at the higher secondary stage, MSU. (Planning Commission financed) *Fourth Survey of Research in Education 1983-1988,* Vol. II, NCERT.

Chakroun, B. (2010).N*ational qualification frameworks: from policy borrowing to policy learning*. *ERIC Record EJ883129.*

Choudhury, K. (1990). A study of the vocational aspirations of Standard IX students of English medium schools in Pune city. *Fifth Survey of Educational Research 1988-92,* Vol. 1, New Delhi: NCERT.

Cox, Nancy Lynne (2011). Students' characteristics and self-concept of secondary career and technical education students in a north central Texas region. *Dissertation Abstracts International* Vol. 71 (8). Order Number DA3417741.

Desai, G. & Whiteside, T. (2000). Vocational higher secondary education graduates in the state of Gujarat. Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

Dhote, A.K. (1991). An on-the-spot study of the implementation of the vocationalisation of education programme in the state of Maharashtra. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Division of Educational Research, (n.d.). *Online Survey of Research in Education Retrieved* from http://osre.ncert.org.in/

Emmanuel, M.A.K.L (1990). Vocationalisation of the +2 stage - A study of some major problems of vocationalisation of education in Andhra Pradesh. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Gokhale, H.V. (1984). A Study of vocationalisation at +2 Stage (Commerce Stream). *Fourth Survey of Research in Education. 1983-1988,* Vol. II, New Delhi: NCERT.

Gokhale, H.V. (1985). A study of vocationalization of education at +2 and +3 stages in Commerce Stream (Maharashtra State). *Fourth Survey of Research in Education. 1983-1988,* Vol. II, New Delhi: NCERT.

Gupta, S.M. & Dhote, A.K. (1990) A quick appraisal of the implementation of the centrally sponsored scheme on vocationalisation of secondary education. *Fifth Survey of Educational Research 1988-92*, New Delhi: NCERT.

Gupta, S.M. & Raizada, P. (1991). On-the-spot study of the implementation of vocationalisation of education programme in the state of Karnataka. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Hummel, E.W. (1990). The role of secondary vocational education in the economic development of the building trades industry of Clinton Country. *Dissertation Abstracts International.* 51 (5). Order Number DA9032301.

Intodia S.L. (1993). Vocational needs of tribal children of Rajasthan. *Sixth Survey of Educational Research* 1993-2000, Vol. I, New Delhi: NCERT.

Joshi, L.N. (1992). Vocational achievements and problems faced by students who had passed the +2 vocational education examination. *Fifth Survey of Educational Research 1988-92,* Vol. 1, New Delhi: NCERT.

Kaur, D. (1990). Educational and vocational aspirations of students belonging to different socio-economic locales of Jammu division. *Fifth Survey of Educational Research 1988-92,* Vol. 1, New Delhi: NCERT.

Khanale, P. & Vaingankar, A. (2006).Estimating availability of middle level skilled manpower. *The Turkish Online Journal of Educational Technology* – TOJET, Vol. 5 (2): 4. Retrieved from https://files.eric.ed.gov/fulltext/ED501454.pdf.

Lata, P. (1984). Teachers, Parents and Counsellors, Approaches towards Personal, Vocatonal and Educational Problems of Adolescents. *Fourth survey of research in education, 1983-1988,* Vol. II, New Delhi: NCERT.

Leclereq, J.M. (1994). General education and vocational training at the post compulsory level in Europe: The end of Mutual Disregard? Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

Martin, S.J. (2010). Instructional alignment of workplace readiness skills in career and technical education, Martin, Sarah Jane. *Dissertation Abstracts International* Vol. 71 (2). Order Number DA3393004.

Mc Connell, E.L. (1997). An exploratory study of secondary student's career goals in regard to postsecondary education. *Dissertation Abstracts International* Vol. 57 (11). Order Number DA9711709.

Mohanty, G. (1986). A survey of vocational education in the state of Orissa since Independence (1974-1981). *Fourth survey of research in education 1983-1988*, Vol. II, New Delhi: NCERT.

Mowji, M.N. (1983). An investigation into the educational and vocational problem of higher secondary students of Greater Bombay (1975-1977) English medium. *Fourth Survey of Educational Research 1983-88*, Vol. 1, New Delhi: NCERT.

Operation Research Group (1996). Evaluation of the scheme of vocationalisation of secondary education. Independent Study conducted for MHRD, New Delhi. *Sixth Survey of Educational Research.1993-2000*, New Delhi: NCERT.

Palanive, A., Peter, U., & Richard, M., (2006). A comparison of Business Graduates' Labour Force Destinations Following Post-Secondary Vocational Education and Training in Three Indian States (*i.e*., Kerala, Goa and Haryana). *ERIC Record EJ769116.*

Pillai, S.S. and Srinivasan, R. (1990). A survey of problem of technical students. *Fifth Survey of Educational Research 1988-92*, Vol. 1, New Delhi: NCERT.

Pilz, M., Krisanthan, B., Michalik, B., Zenner, L. & Li, J., (2016). Learning for life and/or work: The status quo of pre-vocational education in India, China, Germany and the USA. *Research in Comparative and International Education*. Vol. 11 (2).Retrieved from http://journals.sagepub.com/doi/ 10.1177/1745499916637173.

Psacharopouls, G. (1997). Vocational education and training today: Challenges and responses. Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

PSSCIVE, (1999). Vocationalisation of education: Perspectives for the new millennium – The challenge. *Independent study. Bhopal, PSSCIVE*. Sixth Survey of Educational Research.1993-2000, New Delhi: NCERT.

Reddy, V.R. (1984). Survey of existing vocationalisation of school education in Andhra Pradesh. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Robert, M.J. (2008). School to career transitions: Career awareness and CTE students. *Dissertation Abstracts International* Vol. 69 (5). Order Number DA3313465.

Sacheti, A.K., Raizada, P. & Verma, A.P. (1992). On-the-spot study of the implementation of the vocationalisation of education programme in the state of Kerela. *Fifth Survey of Educational Research 1988-92,* Vol. 1,New Delhi: NCERT.

Sharma, A.N. (1987). Effectiveness of vocational exploration programme at secondary school level for vocationalisation of education. *Fifth Survey of Educational Research 1988-92,* Vol. I,New Delhi: NCERT.

Simeoni, G.N. (2007). Apprenticeship training and co-operative education in British Columbia. *Dissertation Abstracts International* Vol. 68 (6).

Singh, C. (1988). An evaluative study of vocationalisation of education in Indian schools. *Fifth Survey of Educational Research 1988-92,*New Delhi: NCERT.

Soundaravalli, S. (1984). A critical study of the functioning of the vocational education stream in higher secondary school in Tamil Nadu. *Fourth survey of research in education, 1983-1988,* Vol. II, New Delhi: NCERT.

Subramanian, P. (1990). Socio-economic status of students of polytechnics and their attitude towards manual jobs. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Sudararajan, S., Williams and Sarah S.K. (1993). Teachers' attitude towards vocational education in the higher secondary schools in Tamil Nadu. *Experience in Education,* Vol. 21 (11), pp. 277-290.

Sungoh, S.M. (1991). A study of vocational education and attitude towards vocationalisation of education in East Khasi Hills. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Swain, B.C. (1992). Socially useful productive programme at the secondary stage in Himachal Pradesh: An evaluative study. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Thimmaiah, G., Aziz A., Seetharamu, A.S., & Rayappa, P.H. (1982). *Vocational education : Problems and prospects (A case study of Karnataka).* Bombay : Himalaya Publishing House.

Thongplee, C. (1985). A study of non-formal vocational education programme in the region 5 of Thailand. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Thrasia, E.C. (1983). A Comparative study of the National School System of the USA, UK and India with a view to suggest Measures in promoting a Better Pattern of Vocation Based Common System of Public Education to suit the Needs and Aspiration of Indian Society. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Tome, E. & Goyal, A. (2015). Human capital, human resource development and vocational education and training: the case in India. *European Journal of Training and Development.* Vol. 39 (7). Retrieved from https://www.emeraldinsight. com/doi/abs/10.1108/ EJTD-10-2014-0069.

Vaid, D.K, & Gupta S.M. (1990). A quick appraisal of the implementation of centrally sponsored scheme of vocationalisation of secondary education-Goa. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Verma, B. (1990). A quick appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education - Delhi. *Fifth Survey of Educational Research 1988-92,*New Delhi:NCERT.

Wilson, D.N. (1994). Comparative study of reforms in the post-secondary education and training of young adults. Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

CHAPTER III

METHODOLOGY OF THE STUDY

CHAPTER III

METHODOLOGY OF THE STUDY

The methodology adopted by the investigator in the present study is discussed and presented under the following heads:

1. Method of the Study
2. Population and Sample
3. Construction of Tools
4. Collection of Data
5. Tabulation of Data
6. Statistical Treatment of Data

3.1 Method of Study

A descriptive survey approach was used to collect data for the present study.

3.2 Population and Sample

Population of the present study has been discussed under the following heads:

1. Population and sample of higher secondary schools
2. Population and sample of vocational students
3. Population and sample of vocational teachers
4. Population and sample of parents

3.2.1 Population and sample of higher secondary schools

There were 14 higher secondary schools in Mizoram where 8 vocational courses were offered. All these schools constituted population of the present study. As the number of higher secondary schools offering vocational courses was few, the question of sampling did not arise. Thus, all the 14 higher secondary schools offering vocational subjects were covered in this study.

Table 3.2.1: Schools offering vocational courses in Mizoram

S.No.	School	No. of Courses Offered
1	Gov't Mamawii HSS	2
2	Gov't Khawzawl HSS	2
3	Gov't Republic HSS	1
4	Gov't KM HSS	2
5	Helen Lowry HSS	3
6	Gov't Saitual HSS	1
7	Baptist HSS	1
8	Gov't Serchhip HSS	1
9	Gov't GM HSS	2
10	Gov't Zemabawk HSS	2
11	Gov't Saiha HSS	2
12	Modern English HSS	1
13	Gov't Mizo HSS	1
14	Gov't Central HSS	1

3.2.2 Population and sample of vocational students

The total number of 777 students enrolled in different vocational courses offered by higher secondary school in Mizoram during 2014-2015 constituted population of students for the present study. Sample selection was not done as the number of students enrolled in vocational courses at higher secondary level was not large. All the 14 higher secondary schools offering vocational courses in the State were visited and all the students of vocational subjects present on the day of data collection formed the sample. As such, the sample of the present study came to be 618 students.

Table 3.2.2: Population and sample of students

S.No.	School	Course	2014			
			No. of Students	Total No. of Population	No. of Samples	Total No. of Samples
1	Gov't Mamawii HSS	Computer Technique	19	52	17	51
		Commercial Garment Design and Making	33		34	
2	Gov't Khawzawl HSS	Computer Technique	13	28	9	19
		Sericulture	15		10	
3	Gov't Republic HSS	Computer Software Application	16	16	9	9
4	Gov't KM HSS	Computer Technique	72	102	69	92
		Auto Mobile Engineering Technology	30		23	
5	Helen Lowry HSS	Computer Technique	64	172	51	145
		Auto Mobile Engineering Technology	35		28	
		Medical Laboratory Technician	73		66	
6	Gov't Saitual HSS	Sericulture	13	13	10	10
7	Baptist HSS	Medical Laboratory Technician	50	50	48	48
8	Gov't Serchhip HSS	Horticulture	20	20	14	14
9	Gov't GM HSS	Computer Technique	39	92	33	53
		Horticulture	53		20	
10	Gov't Zemabawk HSS	Commercial Garment Design and Making	7	17	6	12
		Sericulture	10		6	
11	Gov't Saiha HSS	Horticulture	65	78	51	54
		Sericulture	13		3	
12	Modern English HSS	Computer Software Application	19	19	13	13
13	Gov't Mizo HSS	Computer Technique	89	89	70	70
14	Gov't Central HSS	Office Secretaryship	29	29	28	28
Total			777	777	618	618

3.2.3 Population and sample of vocational teachers

The total number of vocational teachers according to SCERT Annual Report 2014-2015 is 52 and this constitutes the population of teachers. The need of sample did not arise as the number of population was not large. The teachers present at the time of data collection during their school visit present the sample of the teachers.

Table 3.2.3: Population and sample of teacher

Total No. of Population	Total No. of Sample
52	33

3.2.4 Population and sample of parents

The sample of parents was selected randomly from each course in every school. In some schools offering more than one course, two parents from each course were selected. So, the number of sample depends on the number of courses the schools offered.

Table 3.2.4: Population and sample of parents

Population of Parents			
Sl.No.	**School**	**Course**	**Total No. of Sample**
1	Gov't Mamawii HSS	Computer Technique	2
		Commercial Garment Design and Making	2
2	Gov't Khawzawl HSS	Computer Technique	2
		Sericulture	2
3	Gov't Republic HSS	Computer Software Application	2
4	Gov't KM HSS	Computer Technique	2
		Auto Mobile Engineering Technology	2
5	Helen Lowry HSS	Computer Technique	2
		Auto Mobile Engineering Technology	2
		Medical Laboratory Technician	2
6	Gov't Saitual HSS	Sericulture	2
7	Baptist HSS	Medical Laboratory Technician	2
	Gov't Serchhip HSS	Horticulture	2
9	Gov't GM HSS	Computer Technique	2
		Horticulture	2
10	Gov't Zemabawk HSS	Commercial Garment Design and Making	2
		Sericulture	2
11	Gov't Saiha HSS	Horticulture	2
		Sericulture	2
12	Modern English HSS	Computer Software Application	2
13	Gov't Mizo HSS	Computer Technique	2
14	Gov't Central HSS	Office Secretaryship	2
Total			44

3.3 Construction of Tools

Since there are no ready-made tools, the researcher developed tools for this purpose. To develop tools, the researcher first consulted different kinds of documents

related to the study, interviewed experts having knowledge of vocational education, teachers and students of vocational education. The first drafts of the tools were tried out in one school and few students and teachers. Based on the feedback, the tools were modified and finalized for use in collecting information. The following are the tools developed by the investigator for collection of data relevant for the study:

1. Observation Schedule cum Questionnaire for higher secondary schools offering vocational courses.
2. Information sheet cum Questionnaire for studying students' background, problems and perception.
3. Information cum Questionnaire for teachers studying teachers' background, problems and perception.
4. Interview Schedule for studying perception of parents about vocational courses in Mizoram.

3.3.1 Observation schedule cum questionnaire for higher secondary schools offering vocational courses

Observation cum Questionnaire was developed to get information on the status of the vocational education in Mizoram for the following:

1. Courses Offered:
   a) School wise distribution of vocational courses with year of introduction.
   b) Type of higher secondary schools offering vocational courses

2. Admission Procedure:
   a) Admission notification
   b) Criteria followed for admission
   c) Course-wise distribution of range of fees at the time of admission
   d) School management-wise range of fees in rupees
   e) Students Enrollment

3. Infrastructural Facilities
   a) Types of School Building
   b) Provision of water, electricity, practical room, school compound for doing practical
   c) Condition of classrooms
   d) Condition of classroom furniture

4. Methods of Imparting the Skills
    a) Instructional time allotted for theory and practical classes
    b) Methods of teaching
    c) Procedure used for evaluation of students

3.3.2 Information sheet cum questionnaire for studying students' background, problems and perception

Information sheet was prepared to find out the students' family and educational background. There were fourteen open ended questions. To find out the problems faced by students, close ended questionnaire consisting eight items was constructed. Questions on perception about the vocational education at higher secondary stage of education in Mizoram were also constructed.

3.3.3 Information sheet cum questionnaire for teachers studying teachers' background, problems and perception

To find out the background of vocational teachers, information sheet containing fourteen items was constructed. Questionnaire for teachers was constructed to find out their problems. There were eleven items in the questionnaire and were close ended while information sheet was open ended. Questions on perception about the vocational education at higher secondary stage of education in Mizoram were also constructed.

3.3.4 Interview schedule for studying perception of parents about vocational courses in Mizoram

Interview schedule was constructed for parents to find out parents' perception about the vocational courses their children pursued and the vocational education at the higher secondary stage in Mizoram. There were thirteen questions in this interview schedule.

3.4 Collection of Data

The required data for the present study were collected from both secondary and primary sources. Secondary sources comprised of books, journals, annual reports of SCERT, office documents, internet, e-book, e-journals and files etc., whereas primary sources comprised of heads of the schools, students, teachers and parents.

1. Data regarding the status of higher secondary schools offering vocational courses were collected with the help of observation cum interview schedule. The researcher visited all the schools observed and administered the tools personally. The heads of the schools and the vocational teachers were met and interviewed.

2. Data regarding the background of students were collected through information sheet prepared for this purpose. Questionnaire was distributed among the students and collected back by the investigator.

3. Data regarding the background of teachers were collected through information sheet prepared for this purpose. Questionnaire was distributed among the teachers and collected back by the investigator.

4. Data regarding the problems faced by the students and their perceptions about vocational education were collected through questionnaire prepared for this purpose. Questionnaire was distributed among the students and collected back by the investigator.

5. Data regarding the problems faced by the teachers and their perceptions about vocational education were collected through questionnaire prepared for this purpose. Questionnaire was distributed among the teachers and collected back by the investigator.

6. Data regarding perceptions of the parents were collected through interview scheduled prepared for this purpose. The researcher interviewed each sampled parents.

3.5 Tabulation of Data

The data were properly classified accordingly. The classified data were tabulated, recorded and arranged orderly in statistical table for further analysis.

3.6 Statistical Treatment of Data

The data obtained after tabulation were analyzed quantitatively. For quantitative analysis descriptive statistics such as frequency and percentage were used.

CHAPTER IV

ANALYSIS AND INTERPRETATION

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter mainly deals with analysis and interpretation of data regarding the status of vocational education at higher secondary education in Mizoram, problems of students and teachers, and perceptions of students, teachers and parents about the prospects of vocational education. They are presented under the heads given below:

1. Status of vocational education at higher secondary stage of education in Mizoram
2. Background of students pursuing vocational courses
3. Background of teachers of vocational courses
4. Problems faced by students of vocational courses
5. Problems faced by teachers of vocational courses.
6. Perception of students about the prospects of vocational education.
7. Perception of teachers about the prospects of vocational education.
8. Perception of parents about the prospects of vocational education.

4.1 Status of Vocational Education at Higher Secondary Stage of Education in Mizoram

Data on status of vocational education at higher secondary stage of education in Mizoram are analysed and interpreted under the following heads:

- Courses offered
- Admission procedure
- Infrastructural facilities
- Methods of imparting the skills

4.1.1 Courses offered

Table 4.1.1: School wise distribution of vocational courses offered and year of introduction

School	Computer Technique (6 Schools)	Computer Software Application (2 Schools)	Commercial Garment Design and Making (2 Schools)	Automobile Engineering Technology (2 Schools)	Medical Laboratory Technician (2 Schools)	Horticulture (3 Schools)	Sericulture (4 Schools)	Office Secretaryship (1 School)
Gov't. Mamawii HSS, Aizawl	2009		2009					
Khawzawl HSS, Khawzawl	2010						2010	
Gov't. Republic HSS, Aizawl		2009						
Gov't. KM HSS, Aizawl	2008			2008				
Helen Lowry HSS, Aizawl	2006			2008	2007			
Gov't. HSS, Saitual,							2009	
Baptist HSS, Lunglei					2007			
Gov't. HSS, Serchhip						2007		
Gov't. G.M. HSS, Champhai	2009					2009		
Gov't. Zemabawk HSS, Aizawl			2009				2009	
Gov't. HSS, Saiha						2007	2008	
Modern English HSS, Aizawl		2008						
Gov't. Mizo HSS, Aizawl	2002							
Gov't. Central HSS, Aizawl								2009

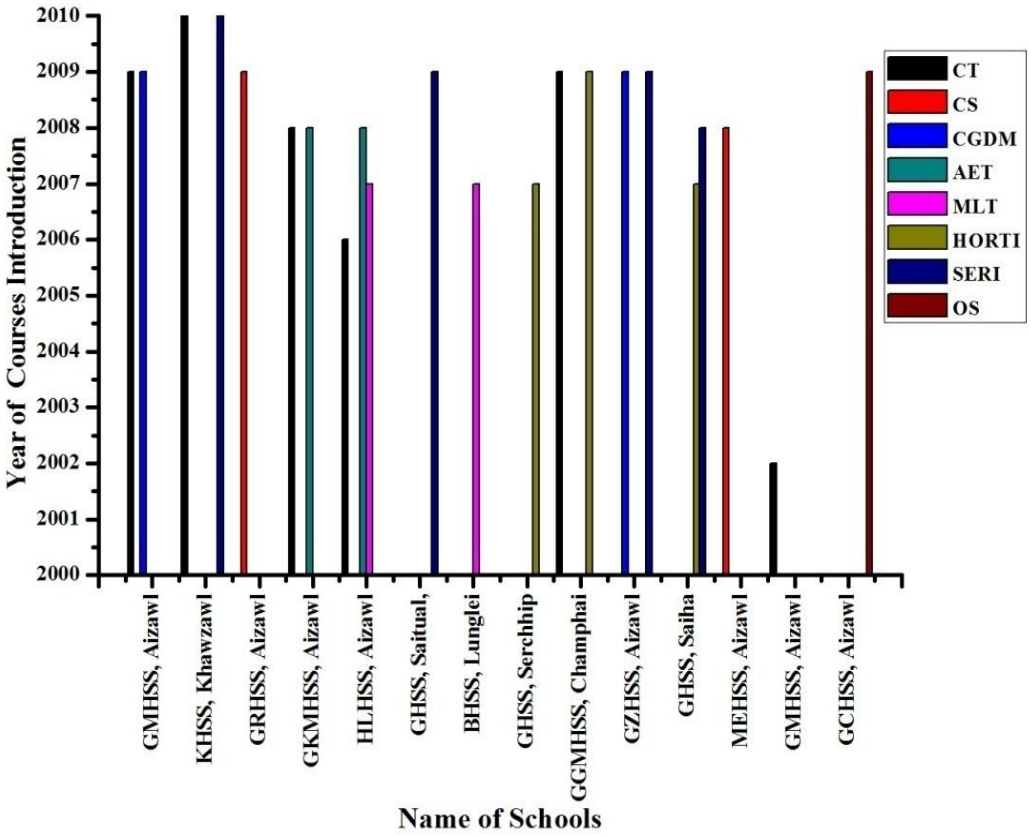

Figure 1: Vocational courses offered and year of introduction

As shown in Table 4.1.1 and Figure 1, Vocational Courses introduced in Higher Secondary School (HSS) in Mizoram are as follow:

1) Computer Technique: This is the vocational course firstly introduced in Mizoram. It was introduced way back in 2002 at Gov't. Mizo Higher Secondary School (HSS), Aizawl. It was again started in 2006 at Helen Lowry Higher Secondary School (HSS), Aizawl; in 2008 at K.M Higher Secondary School, Aizawl and in 2009 at Gov't. Mamawii Higher Secondary School, Aizawl and G.M Higher Secondary School, Champhai; and lastly in 2010 at Khawzawl Higher Secondary School, Khawzawl. This is the most popular course and is offered at 6 Higher Secondary Schools.

2) Computer Software Application: This was firstly introduced in 2008 at Modern English HSS, Aizawl and again in 2009 at Gov't. Republic HSS, Aizawl.

3) Computer Garment Design and Making: This course was started in 2009 at 2 higher secondary schools namely, Gov't. Mamawii HSS, Aizawl and Gov't. Zemabawk HSS, Aizawl.

4) Automobile Engineering Technology: Only 2 higher secondary schools namely, Gov't. KM HSS, Aizawl and Helen Lowry HSS, Aizawl offer this course which was started in these schools in the same year, *i.e.*, 2008.

5) Medical Laboratory Technician: This course, introduced in the year 2007, is offered at two schools namely, Helen Lowry HSS, Aizawl and Baptist HSS, Lunglei.

6) Horticulture: This course was firstly introduced in 2007 at two schools- Gov't. HSS, Serchhip and Gov't. HSS, Saiha and secondly in 2009 at Gov't. GM HSS, Champhai.

7) Sericulture: Sericulture is offered at 4 higher secondary schools. It was started for the first time at Gov't. HSS, Saiha in 2008; at Gov't. HSS, Saitual and Zemabawk HSS, Aizawl in 2009 and at Khawzawl HSS, Khawzawl in 2010.

8) Office Secretaryship: This is the only vocational course offered at one school only, *i.e.*, Gov't. Central HSS, Aizawl. It was started in this school in the year 2009.

Table 4.1.2: Type of higher secondary schools offering vocational courses

Type of HSS	No.	%
Private unaided	0	0
Adhoc Aided	1	7.14
Deficit	3	21.43
Government	10	71.43

Table 4.1.2 illustrates that 10 higher secondary schools which form 71.43 percent of higher secondary schools offering vocational courses are run and managed by the state government while there is no privately managed school offering vocational courses. Among the schools that offer vocational courses, 3 schools with the percentage of 21.43 are deficit. One school (7.14%), i.e. only Khawzawl Higher Secondary School is adhoc aided.

4.1.2 Admission procedure

Table 4.1.3: Admission notification

Means of Notification	No. of HSS	%
Newspaper	6	42.86
Radio	0	0
Television	1	7.14
School notice board	4	28.57
No notification	5	35.71

Looking at Table 4.1.3, it can be seen that 35.71 per cent of higher secondary school offering vocational courses makes no notification for admission whereas the rest 64.29 per cent notify admission. 42.86 percent of higher secondary schools notify admission through newspaper, 28.57 percent school through notice board and 7.14 percent through television. No school uses radio to notify about admission.

Table 4.1.4: Criteria followed for admission

Criteria	No.	%
Performance of students in qualifying examinations	0	0
Admission Test	0	0
Interview	1	7.14
First come first serve basis	13	92.86

As shown by Table 4.1.4, there is only one school (7.14%) that uses interview as criteria for admission. The majority of the higher secondary schools (92.86%) give admission on first come first serve basis. No school (0%) uses the criterion of performance of students in qualifying examinations and admission test.

Table 4.1.5: Course wise distribution of range of fees paid at the time of admission

S.No.	Course	Range of Fees
1	Computer Technique	3250 – 5100
2	Computer Software Application	3550 – 4700
3	Commercial Garment Design and Making	3500 – 4900
4	Automobile Engineering Technology	4200 – 5100
5	Medical Laboratory Technician	5500 – 5700
6	Horticulture	4100 – 5300
7	Sericulture	1300 – 5300
8	Office Secretaryship	5300

Table 4.1.5 reveals that there is a wide range of fees Rs 1300-5700 in vocational courses. Sericulture has the highest range of fee i.e. Rs 3000; the lowest fee is Rs 1300 while the highest fee is Rs 5300. Computer Technique fee ranges from Rs 3250 - 5100, there is Rs 1850 difference. Commercial Garment Design and Making fee ranges from Rs 3500 - 4900, the difference is Rs 1400. The fee of Horticulture ranges from Rs 4100 - 5300, Rs 1200 difference. Computer Software Application fee ranges from Rs 3550 - 4700, there is Rs 1150 difference. Automobile Engineering Technology fee ranges from Rs 4200 – 5100, the difference is Rs 900. Medical Laboratory Technician fee ranges from Rs 5500 – 5700 which is almost the same.

Table 4.1.6: School management wise range of fees in rupees

S. No.	Course	Govt HSS	Deficit HSS	Adhoc Aided HSS
1	Computer Technique	3250 – 4900	5100	4500
2	Computer Software Application	3550	4700	
3	Commercial Garment Design and Making	3500 – 4900		
4	Auto Mobile Engineering Technology	4200	5100	
5	Medical Laboratory Technician		5500-5700	
6	Horticulture	3500 – 4100		
7	Sericulture	3500 – 3550		1300
8	Office Secretary ship	5300		

Table 4.1.6 reveals that in schools under different management, course fees are not same. Among the schools that offer Computer Technique, Deficit school has the highest fees and the lowest fee is found in Government higher secondary school. Though all the schools that offer Commercial Garment Design and Making are Government schools the fees range from Rs 3500 to 4900. Deficit higher secondary school takes more fees than Government school in Automobile Engineering Technology courses. Only Deficit school offers Medical Laboratory Technician course and there is Rs 200 difference in fees. Horticulture course is offered in Government school only and the fees range from Rs 3500 to 4100. The range of fees for Sericulture in Government School is Rs 3500 to 3550, but Adhoc Aided School takes only Rs 1300 for fees. Office Secretaryship is offered only in one Government school and the fee is Rs 5300.

Table 4.1.7: Students enrollment in 2014, 2015 and 2016

S.No	Course	Class	2014	2015	2016	Total	Total of XI & XII	% of total of XI & XII
1	Computer Technique	Cl-XI	177	149	138	464	816	36.66
		Cl-XII	119	121	112	352		
2	Computer Software Application	Cl-XI	17	23	19	59	107	4.81
		Cl-XII	18	11	19	48		
3	Commercial Garment Design and Making	Cl-XI	25	21	35	81	136	6.12
		Cl-XII	15	21	19	55		
4	Automobile Engineering Technology	Cl-XI	43	15	17	75	136	6.12
		Cl-XII	22	27	12	61		
5	Medical Laboratory Technician	Cl-XI	66	57	61	184	353	15.88
		Cl-XII	57	63	49	169		
6	Horticulture	Cl-XI	84	83	91	258	435	19.57
		Cl-XII	54	67	56	177		
7	Sericulture	Cl-XI	26	25	56	107	181	8.14
		Cl-XII	25	23	26	74		
8	Office Secretaryship	Cl-XI	19	4	9	31	59	2.65
		Cl-XII	10	16	4	28		
TOTAL			777	726	723	2223	2223	100

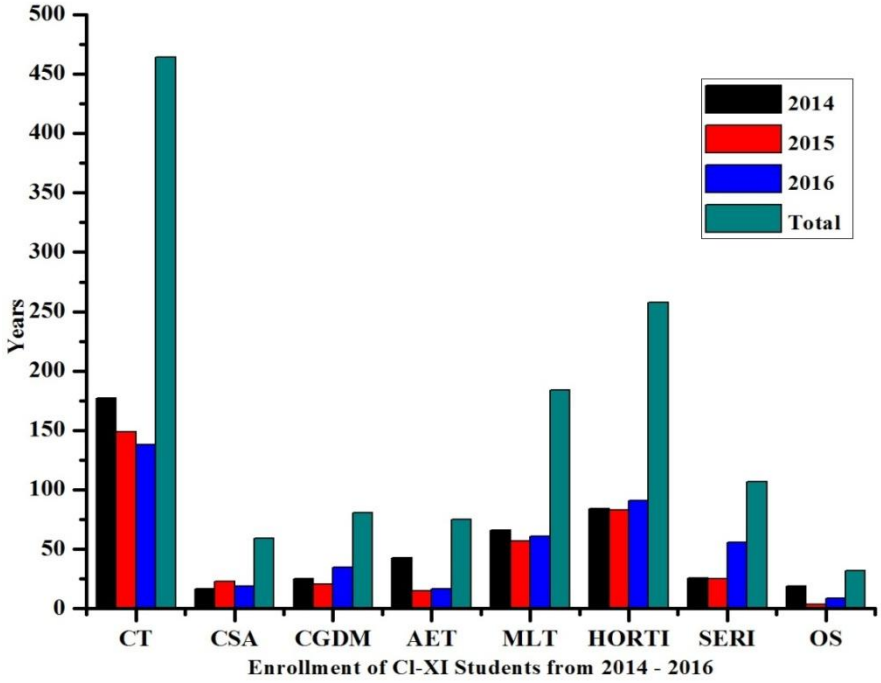

Figure 2: Class-XI students' enrollment from 2014 to 2016

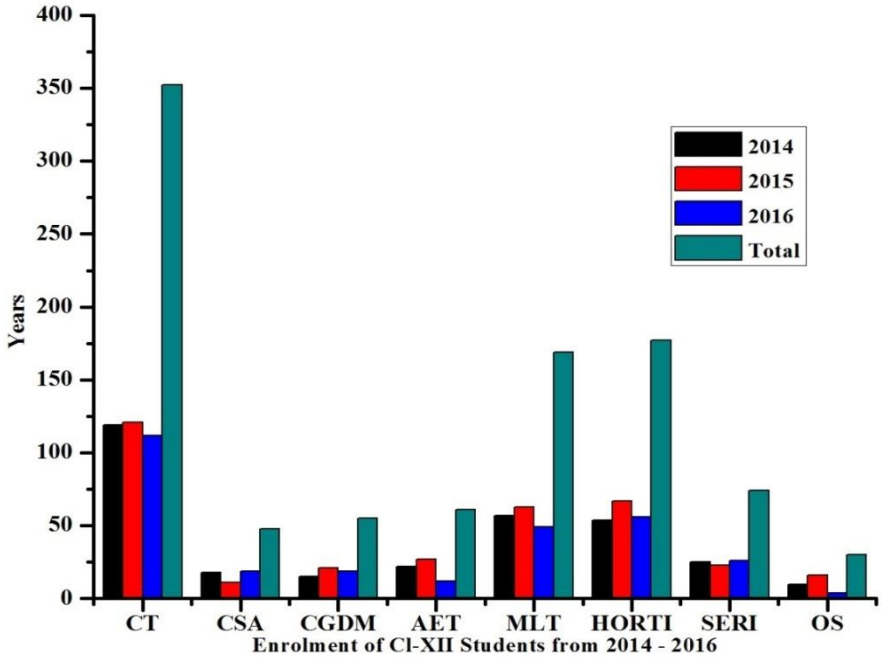

Figure 3: Class-XII students' enrollment from 2014 to 2016

It is clear from Table 4.1.7 and Figure 2 and 3 that Computer Technique has the highest enrollment of students as compared to other courses with the percentage of 36.66 per cent. Horticulture has the second highest enrollment with 19.57 per cent of students. Medical Laboratory Technician comes in third place with 15.88 per cent

followed by Sericulture which has 8.14 per cent of students. Both Commercial Garment Design and Making and Automobile Engineering Technology are in fifth position having 6.12 per cent each. Computer Software Application comes in sixth position with 4.81 per cent. Office Secretaryship has the lowest student enrollment with the percentage of 2.65.

The decline in the number of class XII students from the number of class XI students in the previous year *i.e.*, 2014 and 2015, indicates that in 2015 and 2016, there were drop out students in every course except in Sericulture and Office Secretaryship in 2016. Moreover, the overall enrollment went down in 2015 from 777 to 726, 48 lesser than 2014 and went on decreasing by 3 students in 2016.

4.1.3: Infrastructural facilities

Table 4.1.8: Type of school building

School	Pucca	Semi Pucca	Kutcha	Own Building	Rented Building
No.	9	5	0	13	1
Percentage	64.29	35.71	0.00	92.86	7.14

Table 4.1.8 shows the type of school building of higher secondary schools offering vocational courses. 64.29 percent of the school buildings are pucca, 35.71 percent are semi pucca and there is no kutcha type of school building. 92.86 percent of the higher secondary schools have their own school building while 7.14 percent of the schools are run in rented buildings.

Table 4.1.9: Provision of water, electricity, practical room and school compound for doing practical work

Provision of water	Provision of electricity			Provision of practical room	School compound for doing practical work
Sufficient	Available and regular	Available but irregular	Not available	Suitable	Suitable
No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
13 (92.86)	8 (57.14)	6 (42.86)	0	12 (85.71)	12 (85.71)

Table 4.1.9 reveals that the provision of water is sufficient in 92.86 percent of the higher secondary schools. Provision of electricity is available and regular in 57.14 percent of the higher secondary schools while there is provision of electricity but irregular in 42.86 percent of the higher secondary schools. There is suitable practical

room in 85.71% schools. 85.71 percent of the schools have suitable compound for doing practical work.

Table 4.1.10: Condition of classrooms for vocational courses

Sl. No.	Course	Classroom Condition				
		Very Good	Good	Average	Poor	Very Poor
		No. & %	No. & %	No. & %	No. & %	No. & %
1	Computer Technique	2 (33.33)	2 (33.33)	2 (33.33)		
2	Computer Software Application		1 (50)	1 (50)		
3	Commercial Garment Design and Making		2 (100)			
4	Auto Mobile Engineering Technology	1 (50)		1 (50)		
5	Medical Laboratory Technician	1 (50)	1 (50)			
6	Horticulture			2 (66.67)	1 (33.33)	
7	Sericulture		2 (50)	1 (25)	1 (25)	
8	Office Secretaryship			1 (100)		

It is found from Table 4.1.10 that the classroom conditions for Computer Technique are very good in 33.33 percent, good in 33.33 percent and average in 33.33 percent. 50 percent classrooms of the Computer Software Application are good and 50 percent are average. 100 percent classrooms of Commercial Garment Design and Making are in good conditions. Automobile Engineering Technology has 50 percent classrooms which are in very good conditions where 50 percent are in average conditions. 50 percent classrooms are very good and 50 percent are good for Medical Laboratory Technician. 66.67 percent are average and 33.33 percent are poor in Horticulture. The overall conditions of classroom for Sericulture is 25 percent average, 25 percent poor and another 50 percent good. 100 percent of classroom conditions are in average conditions for Office Secretaryship.

Table 4.1.11: Conditions of furniture for vocational courses in HSS

Furniture	Condition	No.	%
Bench	Adequate	12	85.71
Desk	Adequate	12	85.71

Looking at Table 4.1.11, it can be seen that the number of desks and benches of all the higher secondary schools offering vocational courses are adequate with the percentage of 85.71.

4.1.4 Method of imparting the skills

Table 4.1.12: Instructional time allotted in Computer Technique

School		Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Gov't.Mamawii HSS*	13	9 hrs 45 min	10	7 hrs 30 min	70
2	*Khawzawl HSS*	12	9 hrs	3	2 hrs 15 min	55.55
3	*Gov't. KM HSS*	17	12 hrs 45 min	6	4 hrs 30 min	70
4	*Helen Lowry HSS*	15	11 hrs 15 min	6	4 hrs 30 min	65.63
5	*Gov't. GM HSS*	21	14 hrs	3	2 hrs	75
6	*Gov't. Mizo HSS*	20	12 hrs	3	2 hrs 15 min	70

The above table (Table 4.1.12) reveals that there are 6 higher secondary schools offering vocational course in Computer Technique. Gov't. GM HSS has 21 theory classes for duration of 14 hours and 3 practical classes for 2 hours. Gov't. Mamawii HSS allot 13 theory classes and 10 practical classes for a duration of 9 hours & 45 minutes and 7 hours & 30 minutes respectively. Gov't. KM HSS allot 17 theory classes for 12 hours & 45 minutes and 6 practical classes for 4 hours & 30 minutes. Gov't. Mizo HSS has 20 theory classes for 12 hours and 3 practical classes for 2 hours & 15 min.

Helen Lowry HSS has 15 theory classes for a duration of 11 hours & 15 minutes and 6 practical classes for 4 hours & 30 minutes in a week. Khawzawl HSS allot 12 classes for theory for a duration of 9 hours and 3 practical classes for a duration of 2 hours & 15 minutes.

The Scheme of Vocationalisation of Secondary Education published by Government of India, Ministry of Human Resource Development, Department of Education, New Delhi states in page 11 that the vocational theory and practice in an integrated form would be given nearly 70 per cent of the total instructional time. The rest would be allocated to study of languages and the foundational subjects related to the vocational course. Out of 6 HSS, 3 schools namely, Gov't. Mamawii HSS, Gov't. KM HSS and Gov't. Mizo HSS allot 70 percent of instructional time for theory and practical classes as desired by the scheme of Vocationalisation of Secondary Education. For these classes, Gov't. GM HSS allot 75 percent of instructional time which is higher than the requirement whereas Khawzawl HSS and Helen Lowry HSS allot only 55.55 per cent and 65.63 per cent respectively which are less than the specified time.

Table 4.1.13: Instructional time allotted in Computer Software Application

School		Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Gov't. Republic HSS*	22	14 hrs 40 min	6	4 hrs	70
2	*Modern HSS*	20	12 hrs	3	2 hrs 15 min	70

Table 4.1.13 shows Gov't. Republic HSS has 22 theory classes for a duration of 14 hours & 40 minutes and 6 practical classes for 4 hours in a week. Modern HSS allot 20 theory classes for a duration of 12 hours and 3 practical classes for 2 hours & 15 minutes.

Gov't. Republic HSS and Modern HSS allot 70 per cent total instructional time for theory and practical as required by the scheme of vocationalisation of secondary education.

Table 4.1.14: Instructional time allotted in Commercial Garment Design and Making

School		Total No. of Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Gov't.Mamawii HSS*	13	9 hrs 45 min	10	7 hrs 30 min	70
2	*Gov't.Zemabawk HSS*	23	15 hrs 20 min	3	2hrs	68.42

Table 4.1.14 tells us that the schools that offer Commercial Garment Design and Making have different time table on practical and theory classes. Gov't. Mamawii HSS allot 13 theory classes for a duration of 9 hours & 45 minutes while Gov't. Zemabawk allot 23 theory classes for 15 hours & 30 minutes. For practical class, Gov't. Mamawii HSS allot 10 classes for a duration of 7 hours & 30 minutes and Gov't. Zemabawk HSS allot 3 classes for a period of 2 hours in a week.

Gov't. Mamawii HSS and Gov't. Zemabawk HSS allot 70 per cent and 68.42 per cent respectively of the total instructional time for theory and practical classes. The total instructional time allotted by these two schools are as per the requirement as they are exactly 70 and nearly 70 per cent respectively.

Table 4.1.15: Instructional time allotted in Automobile Engineering Technology

School		Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Gov't. KM HSS*	17	12 hrs 45 min	6	4 hrs 30 min	70
2	*Helen Lowry HSS*	12	9 hrs	9	6 hrs 45 min	65.63

Table 4.1.15 tells that while Gov't. KM HSS has 17 theory classes with 6 practical class, Helen Lowry HSS has 12 theory classes with 9 practical classes. Gov't. KM HSS allot 12 hours & 45 minutes for theory class and 4 hrs & 30 min for practical class. The duration for theory is 9 hours and practical class is 6 hours & 45 minutes in Helen Lowry HSS.

The total instructional time allotted for both theory and practical by Gov't. KM HSS is 70 per cent of the total instructional time which is in agreement with the requirement specified in the Scheme of Vocationalisation of Secondary Education. However, the total instructional time allotted by Helen Lowry HSS *i.e.*, 65.63 per cent is less than the required time.

Table 4.1.16: Instructional time allotted in Medical Laboratory Technician

School		Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Helen Lowry HSS*	12	9 hrs	9	6 hrs 45 min	65.63
2	*Baptist HSS*	17	12 hrs 45 min	6	4 hrs 30 min	70

In Helen Lowry HSS, the number of theory classes for Medical Laboratory Technician is 12 and the total duration is 9 hours. They allot 9 practical classes for a duration of 6 hours & 45 minutes in a week. Baptist HSS allot 17 theory classes and 6 practical classes. The total working hours in a week is 12 hours & 45 minutes and 4 hours & 30 minutes respectively.

Baptist HSS allot 70 per cent of the total instructional time for theory and practical in Medical Laboratory Technician which is in accordance with the specification whereas Helen Lowry HSS does not allot the required instructional time as the total percentage is 65.63.

Table 4.1.17: Instructional time allotted in Horticulture

School		Theory classes in week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Gov't. HSS Serchhip*	24	16 hrs	3	2 hrs	79.41
2	*Gov't. GM HSS*	21	14 hrs	3	2 hr 15 min	75
3	*Gov't. HSSSaiha*	18	13 hrs 30 min	2	1 hrs 30 min	57.14

Among the three schools that offer Horticulture courses, Gov't. HSS Serchhip has 24 theory classes for a duration of 16 hours and 3 practical classes for 2 hours in a week. Gov't. GM HSS has 21 theory classes for 14 hours and 3 practical classes for 2 hours & 15 minutes. Gov't. Saiha HSS has 18 theory classes for 13 hours & 30 minutes and 2 practical classes for 1 hour & 30 minutes.

Two schools namely Gov't. Serchhip HSS and Gov't. GM HSS allot more than 70 per cent of the total instructional time for both theory and practical classes. Gov't. Saiha HSS does not allot the required time as the time allotted by it is only 57.14 per cent of the total instructional time. This means that they give too much time

for languages and foundational subjects related to the course leaving less time for theory and practical classes for Horticulture.

Table 4.1.18: Instructional time allotted in Sericulture

School		Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Khawzawl HSS*	10	11 hrs 15 min	*0	*0	54.54
2	*Gov't.Saitual HSS*	22	14 hrs	*0	*0	62.86
3	*Gov't.Zemabawk HSS*	23	15 hrs 20 min	3	2hrs	68.42
4	*Gov't. HSS, Saiha*	18	13hrs 30 min	2	1 hr 30 min	57.14

*Both Gov't. Saitual HSS and Khawzawl HSS allot no practical class in their routine but have practical class for one whole month or more than one month as required.

Table 4.1.18 presents that there are 4 schools that offer Sericulture course. Gov't. Khawzawl HSS has 10 theory classes for a duration of 11 hours &15 minutes in a week. Gov't. Saitual HSS has 22 theory classes for 14 hours. Gov't. Zemabawk HSS has 23 theory classes for 15 hours & 20 minutes and 3 practical classes for a duration of 2 hours. Gov't. HSS Saiha has 18 theory classes for a duration of 13 hours & 30 minutes with 2 practical classes for 1 hour & 30 minutes.

One school out of 4 Higher Secondary Schools offering Sericulture namely Gov't. Zemabawk HSS allot 68.42 percent *i.e.*, nearly 70 percent of the total instructional time for both theory and practical which is in agreement with the specified requirement. The total instructional time allotted by Gov't. Saitual HSS *i.e.*, 62.86 percent, Gov't. HSS Saiha i.e., 57.14 percent and Gov't. Saitual HSS i.e., 62.86 percent are less than the required time.

Table 4.1.19: Instructional time allotted in Office Secretaryship

School		Theory classes in a week		Practical classes in a week		% of the Total Instructional Time
		No. of classes	Hours Allotted	No. of classes	Hours Allotted	
1	*Gov't. Central HSS*	23	15 hrs 20 min	3	2hrs	68.42

Gov't. Central HSS is the only school that offers Office Secretaryship. They allot 23 theory classes for duration of 15 hours & 20minutes. The total practical class in a week is 3 and the duration is 2 hours.

Gov't. Central HSS allot 68.42 per cent of the total instructional time for theory and practical in Office Secretaryship which is in accordance with the specification.

Table 4.1.20: Methods of teaching

Methods of Teaching		Computer Technique (6 Schools)	Computer Software Application (2 Schools)	Commercial Garment Design and Making (2 Schools)	Automobile Engineering Technology (2 Schools)	Medical Laboratory Technician (2 Schools)	Horticulture (3 Schools)	Sericulture (4 Schools)	Office Secretaryship (1 School)
		No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
1	Lecture	6 (100)	2 (100)	2 (100)	2 (100)	2 (100)	3 (100)	4 (100)	1 (100)
2	Practical	6 (100)	2 (100)	2 (100)	2 (100)	2 (100)	3 (100)	4 (100)	1 (100)
3	Demonstration	0 (0)	0 (0)	2 (100)	1 (50)	0 (0)	1 (33.33)	0 (0)	0 (0)
4	Project work	4 (67)	2 (100)	2 (100)	1 (50)	1 (50)	3 (100)	2 (50)	1 (100)
5	Experiment	1 (17)	2 (100)	1 (50)	0 (0)	1 (50)	3 (100)	4 (100)	1 (100)
6	Home assignment	5 (83)	2 (100)	2 (100)	1 (50)	2 (100)	3 (100)	4 (100)	0 (0)

Table 4.1.20 shows the different methods of teaching adopted for teaching different courses:

1) For teaching Computer Technique course, lecture and practical methods are used by 100 per cent schools. No school uses Demonstration method. Home assignment by 83 per cent, project work is used by 67 per cent and experiment methods by 17 per cent of the higher secondary schools offering the subject/course.

2) The methods of teaching used by higher secondary schools for teaching Computer Software Application are all the same – lecture, practical, project work, experiment, assignment are used by 100 per cent of the schools and no school uses demonstration method.

3) 100 per cent of the schools offering Commercial Garment Design and Making use the methods of lecture, practical, demonstration, project work and home assignment. 50 per cent of the schools use experiment method for teaching the course.

4) None of the schools offering Automobile Engineering Technology course uses experiment method for teaching while100 per cent use lecture and practical methods of teaching. 50 per cent use demonstration, project work and home assignment as methods of teaching.

5) Lecture, practical and home assignment methods of teaching are used by 100 per cent of the schools for teaching Medical Laboratory Technician course. Project and experiment methods are used by 50 per cent of the schools. No school uses demonstration method.

6) In higher secondary schools that offer Horticulture course, lecture, practical methods, project work, experiment and home assignment are used by 100 per cent and demonstration method by 33.33 per cent of the school for teaching the course.

7) Four methods of teaching *i.e.*, lecture, practical; experiment and home assignment are used by 100 per cent of the schools for teaching Sericulture Course. 50 per cent use project method and no school uses demonstration method for teaching the subject.

8) For teaching Office Secretaryship course 100 per cent higher secondary schools use lecture, practical, project and experiment. None of the schools use demonstration and home assignment methods for teaching the course.

Table 4.1.21: Procedure used for evaluation of students

Procedure of Evaluation		Vocational Courses							
		Computer Technique (6 Schools)	Computer Software Application (2 Schools)	Commercial Garment Design and Making (2 Schools)	Automobile Engineering Technology (2 Schools)	Medical Laboratory Technician (2 Schools)	Horticulture (3 Schools)	Sericulture (4 Schools)	Office Secretaryship (1 School)
		No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
1	Class test	6 (100)	1 (50)	2 (100)	2 (100)	2 (100)	3 (100)	4 (100)	1 (100)
2	Weekly test	2 (33.33)	2 (100)	2 (100)	0 (0)	1 (50)	3 (100)	4 (100)	1 (100)
3	Monthly test	1 (16.67)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
4	Internal test	2 (33.33)	1 (50)	1 (50)	2 (100)	2 (100)	1 (33.33)	1 (25)	0 (0)
5	Assignment	3 (50)	2 (100)	2 (100)	1 (50)	0 (0)	2 (66.66)	1 (25)	0 (0)
6	Seminar	1 (16.67)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
7	Project work	2 (33.33)	2 (100)	2 (100)	1 (50)	1 (50)	3 (100)	2 (50)	1 (100)
8	Practical	4 (66.67)	2 (100)	2 (100)	2 (100)	2 (100)	3 (100)	4 (100)	1 (100)

The above table (Table 4.1.21) shows the procedure of evaluation used for different courses in different schools:

1) For evaluation of students offering Computer Technique course, 100 per cent schools use class test, 66.67 per cent schools practical, 50 per cent schools assignment, 33.33 per cent schools weekly test, internal test and project work. Only 16.67 per cent school use monthly test and seminar as one of the procedures of evaluation.

2) The procedures of evaluation such as weekly test, assignment, project work and practical are used by 100 per cent schools for students offering Computer Software Application course. Class test and internal test are used by 50 per cent of the schools.

3) Class test, weekly test, assignment, project work and practical are used by 100 per cent of the schools for evaluating students offering Commercial Garment Design

and Making course. Internal test and seminar are used by 50 per cent of the schools. No school uses monthly test.

4) Internal test, class test and practical are used as evaluation tools by 100 per cent schools for students of Automobile Engineering Technology course. Assignment and project work are used by 50 per cent whereas monthly test, weekly test and seminar are used by none of the schools.

5) For students of Medical Laboratory Technician, 100 per cent school use class test, internal test and practical. 50 per cent use weekly test and project work. No school uses monthly test, assignment and seminar.

6) For evaluation of students of Horticulture, class test, weekly test, project work and practical are used by 100 per cent schools. Assignment is used by 66.66 per cent and internal test by 33.33 per cent. No school uses monthly test and seminar.

7) No school uses monthly test and seminar while 100 per cent of schools offering sericulture used class test, weekly test and practical for evaluating students of Sericulture course. 50 per cent of the schools use project work, internal test and assignment by 25 per cent.

8) Project work, class test, weekly tests and practical are used by 100 per cent schools for evaluating students of Office Secretaryship course. No school uses monthly test, internal test, assignment and seminar.

4.2 Background of Students Pursuing Vocational Courses

Backgrounds of students pursuing vocational courses are presented for analysis and interpretation under the following heads:

- Class and Course Wise Distribution of Students
- Hometown of the Students
- Number of Local and Non-Local Students
- Present Address of the Students
- Age Wise Distribution of the Students
- Gender Wise Distribution of the Students
- Fathers' Occupation
- Fathers' Educational Qualification

- Mothers' Occupation
- Mothers' Educational Qualification
- Academic Record of Students in HSLC
- Repeaters in Different Stage of Schools
- Helpers in Decision Making to Study Vocational Courses

Table 4.2.1: Class and course wise distribution of students

Class	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
XI	148 (41.00)	10 (2.77)	33 (9.14)	31 (8.59)	61 (16.90)	42 (11.63)	17 (4.71)	19 (5.26)	361 (58.41)
XII	101 (39.30)	12 (4.67)	7 (2.73)	20 (7.78)	53 (20.62)	43 (16.73)	12 (4.67)	9 (3.50)	257 (41.59)

A cursory glance at the above table (Table 4.2.1) shows that Class XI respondents are higher in per cent (58.41%) than Class XII students/respondents (41.59%). In Class XI, Computer Technique has the highest enrollment of students as compared to other courses with 41 per cent. The second highest enrolment is in Medical Laboratory Technician with 16.90 per cent of students. Computer Software Application has the lowest enrollment of students having only 2.77 per cent and Sericulture has 4.71 per cent enrolment. Enrolment in other courses like Office Secretaryship, Automobile Engineering Technology and Horticulture range from 5.26 per cent to 11.63 per cent.

Majority of students of Class XII are in Computer Technique with 39.30 per cent, Medical Laboratory Technician comes in second place with 20.62 per cent and Horticulture has 16.73 per cent of students. Commercial Garment Design and Making and Office Secretaryship have low students enrolment of 2.73 per cent and 3.50 per cent respectively. Enrolment of students in other vocational courses range from 4.67 to 7.78 percentages.

Table 4.2.2: Hometown of the students

Home Town	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Aizawl City	145 (51.42)	18 (6.38)	29 (10.29)	25 (8.87)	40 (14.18)	0	3 (1.06)	22 (7.80)	282 (45.63)
District Hqrs.	35 (32.41)	0	0	4 (3.70)	39 (36.11)	28 (25.93)	1 (0.93)	1 (0.93)	108 (17.48)
Town	19 (20.43)	0	1 (1.08)	3 (3.23)	7 (7.53)	50 (53.76)	13 (13.98)	0	93 (15.05)
Village	50 (37.04)	4 (2.96)	10 (7.41)	19 (14.07)	28 (20.74)	7 (5.19)	12 (8.89)	5 (3.70)	135 (21.84)

The above table (Table 4.2.2) clearly shows that students from Aizawl City constitute the largest percentage *i.e.,* 45.63 per cent whereas students from towns constitute the smallest percentage *i.e.*, 15.05 per cent. Village students form 21.84 per cent and students from district headquarters form 17.48 per cent of vocational students.

The majority students (51.42%) who opt for Computer Technique courses are from Aizawl City and 14.18 per cent of students opt for Medical Laboratory Technician course. Only 1.06 per cent students from Aizawl City opt for Sericulture course. Other students *i.e.,* 6.38 per cent to 10.29 per cent study other courses.

Among the students who come from District Headquarters, Medical Laboratory Technician is the most pursued course followed by Computer Technique and Horticulture. There is no student from district headquarters who study Computer Software Application and Commercial Garment Design and Making. A few per cent of students like 0.93 per cent study Sericulture and Office Secretaryship.

Among the students (15.05 %) from Town area, Horticulture course seems to be quite popular as the highest percentages of students *i.e.,* 53.76 per cent opt for it. Another two popular courses are Computer Technique opted by 20.43 per cent and Sericulture by 13.98 per cent of students. Only 1.08 per cent of students opt for

Commercial Garment Design and Making. No student opts for Computer Software Application and Office Secretaryship.

Computer Technique course again has the highest enrolment with 37.04 per cent of students whose permanent address is in Village (21.84). Medical Laboratory Technician comes in second place with 20.74 per cent students. Students who study Computer Software Application are only 2.96 per cent. Other students ranging from 2.96 per cent to 14.07 per cent study other courses.

Table 4.2.3: Number of local and non-local students

Number of Local and Non-Local students		
Course	**Number of Students with %**	
	Local	**Non-Local**
Computer Technique	172 (69.08)	77 (30.92)
Computer Software Application	18 (81.82)	4 (18.18)
Commercial Garment Design and Making	29 (72.50)	11 (27.50)
Automobile Engineering Technology	25 (49.02)	26 (50.98)
Medical Laboratory Technician	73 (64.04)	41 (35.96)
Horticulture	28 (32.94)	57 (67.06)
Sericulture	14 (48.28)	15 (51.72)
Office Secretaryship	22 (78.57)	6 (21.43)
Total	381 (61.65)	237 (38.35)

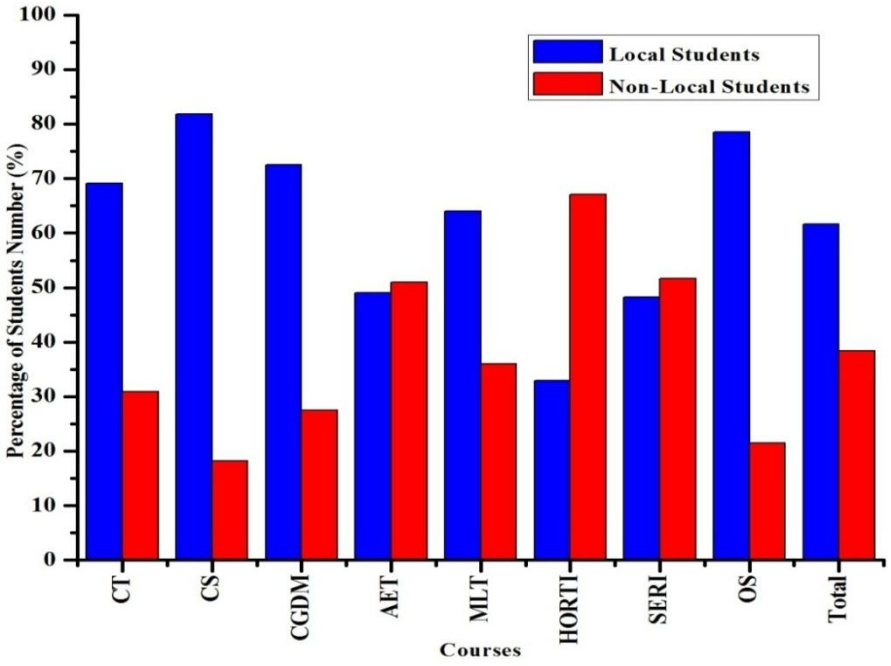

Figure 4: Percentage of local and non-local students

Table 4.2.3 and Figure 4 compare local and non-local students in each course and show that the percentage of non-local students is higher than local students in Automobile Engineering Technology, Horticulture and Sericulture.

Table 4.2.4: Age wise distribution of the students

Age	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Below 16	9 (42.86)	1 (4.76)	1 (4.76)	2 (9.52)	4 (19.06)	2 (9.52)	0	2 (9.52)	21 (3.40)
16	52 (38.52)	5 (3.70)	12 (8.89)	10 (7.41)	35 (25.93)	12 (8.89)	8 (5.92)	1 (0.74)	135 (21.84)
17	90 (42.25)	5 (2.35)	14 (6.57)	19 (8.92)	46 (21.6)	22 (10.33)	8 (3.76)	9 (4.22)	213 (34.46)
18	67 (41.88)	4 (2.5)	11 (6.87)	13 (8.12)	19 (11.87)	24 (15)	7 (4.38)	15 (9.38)	160 (25.88)
Above 18	31 (34.83)	7 (7.87)	2 (2.25)	7 (7.86)	10 (11.24)	25 (28.09)	6 (6.74)	1 (1.12)	89 (14.40)

Table 4.2.4 reveals that there are 3.40 per cent under-aged students who are below 16 years and 14.40 per cent over-aged students who are above 18 years from the overall respondent.

Among the students below 16 years, majority of the students *i.e.,* 42.86 per cent study Computer Technique while there is no one who study Sericulture. As low as 4.76 per cent students each study Computer Software Application and Commercial Garment Design & Making, 9.52 per cent to 19.06 per cent of the students study other courses.

Percentage of students studying Computer Technique is also highest among over aged students *i.e.,* 34.83 per cent and 28.09 per cent students study Horticulture. Only 1.12 per cent and 2.25 per cent of the students study Office Secretaryship and Commercial Garment Design and Making respectively. The rest of the students ranging from 6.74 per cent to 11.24 opt other courses.

Among the students of 16 years, Computer Technique has the highest enrolment with 38.52 per cent and Medical Laboratory Technician has the second highest enrolment with 25.93 per cent. There is only 0.74 per cent who studies Office Secretaryship. Other students between 3.70 per cent and 8.89 per cent study other vocational courses.

Like students of 16 years, 17 years students also offer Computer Technique which constitutes the highest enrolment percentage *i.e.,* 42.25 and 21.6 per cent choose Medical Laboratory Technician. Computer Software Application has the lowest enrolment with 2.35 per cent. 3.76 to 10.33 per cent of students study other vocational courses.

Computer Technique has the highest percentage of enrollment with 41.88 per cent and Computer Software Application has the lowest enrolment of students with 2.5 per cent of students among 18 years of age. 4.38 per cent of students to 15 per cent of students opt for other courses.

Table 4.2.5: Gender wise distribution of the students

Gender	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
M	197 (54.72)	21 (5.83)	0	50 (13.89)	14 (3.89)	42 (11.67)	20 (5.56)	16 (4.44)	360 (58.41)
F	52 (20.23)	1 (0.39)	40 (15.57)	0	100 (38.91)	43 (16.73)	9 (3.5)	12 (4.67)	257 (41.58)

A look at the above table (Table 4.2.5) shows that there are more male students *i.e.,* 58.41 per cent who choose vocational course than female *i.e.,* 41.58 per cent. The highest percentage *i.e.,* 54.57 of male respondents opt Computer Technique while there is no male student who study Commercial Garment Design and Making. Other male students ranging from 3.89 per cent to 13.89 per cent study other courses.

Among female students, 38.91 per cent choose Medical Laboratory Technician and 20.23 per cent study Computer Technique. There is no female student in Automobile Engineering Technology and only 0.39 per cent chooses Computer Software Technology. Other 3.5 per cent to 16.73 per cent female students study other courses.

Table 4.2.6: Fathers' occupation

Father's Occupation	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Government Servant	93 (46.97)	7 (3.53)	17 (8.59)	15 (7.58)	44 (22.22)	9 (4.55)	2 (1.01)	11 (5.55)	198 (32.03)
Business	21 (36.84)	5 (8.77)	0	5 (8.77)	15 (26.32)	8 (14.04)	2 (3.51)	1 (1.75)	57 (9.32)
Private company	5 (38.46)	0	1 (7.69)	2 (15.39)	3 (23.08)	0	1 7.69)	1 (7.69)	13 (2.10)
Self Employed	68 (30.49)	4 (1.79)	15 (6.73)	22 (9.87)	28 (12.56)	62 (27.8)	14 (6.28)	10 (4.48)	223 (36.08)
Others	62 (48.82)	6 (4.72)	7 (5.51)	7 (5.51)	24 (18.9)	6 (4.72)	10 (7.88)	5 (3.94)	127 (20.71)

Occupations of fathers of vocational students vide Table 4.2.6 reveals that the highest percentage i.e., 36.08 per cent of them are self-employed. They are cultivators, farmers, manual workers, labourer, carpenters etc. The second highest percentage *i.e.*, 32.03 per cent of the parents are Government Servants whereas 9.32 per cent are engaged in business and 2.10 per cent work in private company. Rest of the parents *i.e.*, 20.71 per cent are engaged in other occupations.

The highest percentage of students from each group irrespective of their fathers' occupation opt for Computer Technique. Medical Laboratory Technician is the course opted by second highest percentage of students whose fathers are Government Servants, engaged in small business, private company and other occupations. However, the second highest percentage of students whose fathers are self-employed go for Horticulture.

Table 4.2.7: Fathers' educational qualification

Father's Educational Qualification	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
VIII	72 (38.50)	8 (4.28)	9 (4.81)	16 (8.56)	21 (11.23)	38 (20.32)	14 (7.49)	9 (4.81)	187 (30.26)
HSLC	81 (42.41)	5 (2.62)	8 (4.19)	13 (6.81)	34 (17.80)	29 (15.18)	11 (5.76)	10 (5.23)	191 (30.91)
HSSLC	53 (46.08)	2 (1.74)	9 (7.83)	9 (7.83)	24 (20.87)	14 (12.17)	1 (0.87)	3 (2.61)	115 (18.61)
Graduate	37 (36.27)	6 (5.88)	12 (11.77)	12 (11.77)	25 (24.51)	3 (2.94)	2 (1.96)	5 (4.9)	102 (16.50)
PG	5 (29.42)	1 (5.88)	1 (5.88)	0	8 (47.06)	0	1 (5.88)	1 (5.88)	17 (2.75)
M.Phil	0	0	1 (50.00)	0	1 (50)	0	0	0	2 (0.32)
Ph.D	1 (25.00)	0	0	1 (25)	1 (25)	1 (25)	0	0	4 (0.65)

Table 4.2.7 shows that 30.91 per cent and 30.26 per cent of fathers of vocational students are HSLC and Class VIII passed respectively. This indicates that majority (61.17%) of the fathers are with HSLC and below qualifications. Only 16.50 per cent of the fathers are graduates, 2.75 per cent post-graduates, 0.32 per cent M.Phil and 0.65 per cent Ph.D degree holders.

Computer Technique is the course pursued by highest percentage of students whose fathers are graduates and below whereas Medical Laboratory Technician is the course opted by largest percentage of students whose fathers are post-graduates and, 50 per cent and 25 per cent of students whose fathers are with M.Phil and Ph.D degrees respectively. While the second most popular course is Horticulture for students whose fathers are Class VIII passed, it is Medical Laboratory Technician for those whose fathers are HSLC, HSSLC and graduates. Again, while the only two

students whose fathers are M.Phil degree holders, opt for Commercial Garment Design and Making and Medical Laboratory Technician, the only four students whose fathers are with Ph.D degree go for the courses of Computer Technique, Automobile Engineering Technology, Medical Laboratory Technician and Horticulture.

Table 4.2.8: Mothers' occupation

Mother's Occupation	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Government Servant	33 (41.77)	1 (1.27)	6 (7.59)	6 (7.59)	17 (21.52)	13 (16.46)	0	3 (3.8)	79 (12.78)
Business	57 (45.6)	5 (4)	9 (7.2)	6 (4.8)	27 (21.6)	9 (7.2)	6 (4.8)	6 (4.8)	125 (20.23)
Private company	3 (37.50)	0	1 (12.50)	2 (25)	1 (12.50)	1 (12.50)	0	0	8 (1.29)
Self Employed	73 (33.96)	10 (4.65)	10 (4.65)	20 (9.3)	28 (13.02)	48 (22.33)	14 (6.51)	12 (5.58)	215 (34.79)
Others	83 (43.46)	6 (3.14)	14 (7.33)	17 (8.90)	41 (21.47)	14 (7.33)	9 (4.71)	7 (3.66)	191 (30.91)

Table 4.2.8 reveals that occupation of the highest percentage of mothers of vocational students (34.79%) is self-employed. This implies that the mothers are cultivators, farmers, manual workers, labourer, carpenters etc. The second highest percentage (30.91%) of the mothers are engaged in other occupations whereas 20.23 per cent are engaged in business and 12.78 per cent are Government Servants. Rest of the parents *i.e.*, 1.29 per cent work in private company.

The highest percentage of students from each group irrespective of their mothers' occupation opt for Computer Technique. Medical Laboratory Technician is the course opted by second highest percentage of students whose mothers are Government Servants, engaged in small business, private company and other occupations. However, the second highest percentage of students whose mothers are self-employed go for Horticulture.

Table 4.2.9: Mothers' educational qualification

Mother's Educational Qualification	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
VIII	99 (40.33)	9 (3.7)	11 (4.53)	18 (7.41)	30 (12.35)	47 (19.34)	16 (6.58)	14 (5.76)	243 (39.32)
HSLC	81 (38.39)	10 (4.74)	12 (5.69)	19 (9.01)	47 (22.27)	24 (11.37)	8 (3.79)	10 (4.74)	211 (34.14)
HSSLC	51 (47.66)	2 (1.87)	7 (6.54)	10 (9.35)	21 (19.63)	11 (10.28)	2 (1.87)	3 (2.80)	107 17.31)
Graduate	17 (35.42)	0	9 (18.75)	4 (8.33)	12 (25)	3 (6.25)	2 (4.17)	1 (2.08)	48 (7.77)
PG	2 (28.57)	1 (14.29)	0	0	3 (42.85)	0	1 (14.29)	0	7 (1.13)
M.Phil	0	0	0	0	0	0	0	0	0
Ph.D	0	0	1 (50)	0	1 (50)	0	0	0	2 (0.32)

Table 4.2.9 shows that 39.32 per cent and 34.14 per cent of mothers of vocational students are Class VIII and HSLC passed respectively. This indicates that majority (73.46%) of the mothers are with HSLC and below qualifications. Only 7.77 per cent of the mothers are graduates, 1.13 per cent post-graduates, and 0.32 per cent Ph.D degree holders.

Computer Technique and Office Secretaryship are the courses pursued by highest percentage of students whose mothers are HSSLC and below whereas Medical Laboratory Technician, Computer Software Application and Sericulture are the courses opted by largest percentage of students whose mothers are post-graduates. Horticulture is most popular among students whose mothers are Class VIII passed and it is Commercial Garment Design and Making for students having graduate mothers. Students whose mothers study till HSSLC go for Automobile Engineering Technology.

Table 4.2.10: Academic record of students in HSLC

Educational background in Class X	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
MBSE	249 (40.42)	22 (3.57)	40 (6.49)	51 (8.28)	113 (18.34)	84 (13.64)	29 (4.71)	28 (4.55)	616 (99.68)
CBSE	0	0	0	0	1 (50)	1 (50)	0	0	2 (0.32)
Other	0	0	0	0	0	0	0	0	0
Before 2011	3 (20)	0	0	2 (13.33)	3 (20)	5 (33.34)	2 (13.33)	0	15 (2.43)
2011	9 (32.15)	2 (7.14)	0	0	14 (50)	2 (7.14)	0	1 (3.57)	28 (4.53)
2012	43 (39.81)	9 (8.33)	3 (2.78)	11 (10.19)	22 (20.37)	17 (15.74)	3 (2.78)	0	108 (17.48)
2013	70 (39.33)	2 (1.33)	13 (7.3)	15 (8.43)	33 (18.54)	24 (13.48)	8 (4.49)	13 (7.3)	178 (28.80)
2014	124 (42.91)	9 (3.11)	24 (8.3)	23 (7.96)	42 (14.53)	37 (12.8)	16 (5.54)	14 (4.85)	289 (46.76)
Distinc-tion	1 (100)	0	0	0	0	0	0	0	1 (0.16)
1st	23 (45.1)	1 (1.96)	1 (1.96)	0	21 (41.18)	3	1 (1.96)	1 (1.96)	51 (8.25)
2nd	99 (41.77)	8 (3.38)	22 (9.28)	12 (5.06)	67 (28.27)	11 (4.64)	12 (5.06)	6 (2.53)	237 (38.35)
3rd	126 (38.3)	13 (3.95)	17 (5.17)	39 (11.86)	26 (7.9)	71 (21.58)	16 (4.86)	21 (6.38)	329 (53.24)
Rank Holder	0	0	0	0	0	0	0	0	0

Table 4.2.10 reveals that majority (99.68%) of higher secondary school students opting vocational courses passed HSLC under Mizoram Board of School Education and that only 0.32 per cent passed it under Central Board of School Education. While 46.76 per cent of the students passed HSLC in 2014, 28.80 per cent passed in 2013. The rest passed it prior to 2013 which may imply that they did not continue their studies right away or they have repeated some classes.

Divisions of passing the HSLC examinations indicate that students pursuing vocational courses are mainly average and below average students. There are 0.16 per cent who passed HSLC in Distinction and 8.25 per cent who passed it in I Division.

The rest 38.35 per cent and 53.24 per cent passed HSLC in II Division and III Division respectively.

Table 4.2.11: Repeaters in different stages of schools

Repeaters in different stage of school	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Primary	27 (40.3)	4 (5.97)	5 (7.46)	5 (7.46)	10 (14.93)	11 (16.42)	1 (1.49)	4 (5.97)	67 (10.84)
Middle	31 (44.92)	5 (7.25)	3 (4.35)	8 (11.59)	7 (10.14)	5 (7.25)	5 (7.25)	5 (7.25)	69 (11.16)
High School	44 (34.92)	5 (3.97)	7 (5.56)	12 (9.52)	23 (18.25)	20 (15.87)	10 (7.94)	5 (3.97)	126 (20.39)
Higher Secondary School	35 (41.67)	7 (8.33)	0	6 (7.14)	19 (22.62)	12 (14.29)	4 (4.76)	1 (1.19)	84 (12.59)

Table 4.2.11 shows that many students pursuing vocational courses at higher secondary stage of education are repeaters of classes at different stages of education such as primary, middle, high schools and higher secondary stages. High School is the stage in which percentage of repeaters is highest *i.e.*, 20.39 per cent followed by higher secondary school with 12.59 per cent repeaters, middle school with 11.16 per cent repeaters and primary school with10.84 per cent repeaters.

Computer Technique is the course opted by highest percentage of repeaters at each stage. Horticulture is the second most popular course among primary class repeaters, Automobile Engineering Technology among middle class repeaters, and Medical Laboratory Technician among high school and higher secondary school repeaters.

Table 4.2.12: Students helpers in decision making to study vocational courses

Helpers in Decision Making	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Teacher	3 (23.08)	1 (7.69)	2 (15.39)	1 (7.69)	1 (7.69)	4 (30.77)	0	1 (7.69)	13 (2.10)
Parent	24 (22.43)	2 (1.87)	7 (6.54)	7 (5.54)	34 (30.84)	21 (19.63)	7 (6.54)	6 (5.61)	107 (17.31)
Friend	2 (25)	0	1 (12.5)	3 (37.50)	0	1 (12.5)	0	1 (12.5)	8 (1.29)
Self	220 (44.90)	19 (3.88)	30 (6.12)	40 (8.16)	79 (16.33)	59 (12.04)	22 (4.50)	20 (4.08)	490 (79.29)

Table 4.2.12 indicates that majority of the students *i.e.*, 79.29 per cent are decision makers in pursuing vocational course, parents of 17.31 per cent of students help their children in making the decision to study vocational courses. Only few students *i.e.*, 2.10 per cent were advised by teachers and 1.29 per cent by friends to study vocational courses.

The largest percentage of students who make the decision to take vocational course on their own (i.e., 44.90%) go for Computer Technique course. Automobile Engineering Technology is the course chosen by the largest percentage of students who are helped by their friends in making the decision to join vocational course whereas it is Medical Laboratory Technician for those helped by parents and Horticulture for those helped by the teachers.

4.3 Background of Teachers of Vocational Courses

Backgrounds of teachers of vocational courses are presented for analysis and interpretation under the following heads:

- Hometown of Vocational Teachers
- Present Address of Teachers
- Age Wise Distribution of Teachers
- Gender Wise Distribution of Teachers

- Teachers' Academic Record in HSLC
- Teachers' Academic Record in HSSLC
- Teachers' Academic Record in Bachelor Degree
- Teachers' Academic Record in Post Graduate Degree
- Teachers' Educational Qualification
- Teachers' Year of Appointment
- Teachers' Nature of Appointment
- Teachers' Teaching Experience
- Numbers of Teachers' Training Undergone
- Number of Teachers' Paper Publication

Table 4.3.1: Hometown of teachers

Home Town	Hometown and Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Aizawl City	6 (31.58)	3 (15.79)	2 (10.53)	2 (10.53)	1 (5.26)	0	2 (10.53)	3 (15.79)	19 (57.57)
Dist. Hqrs.	3 (30)	1 (10)	0	0	1 (10)	2 (20)	3 (30)	0	10 (30.30)
Town	1 (33.33)	0	0	0	1 (33.33)	0	1 (33.33)	0	3 (9.09)
Village	0	0	0	0	0	1 (100)	0	0	1 (3.03)

Table 4.3.1 shows that the largest percentages of vocational course teachers (57.57%) are from Aizawl City and teachers from district headquarters constitute the second largest percentage (*i.e.*, 30.30%). Only 9.09 per cent and 3.03 per cent of the teachers are from towns and villages respectively.

The largest percentages of teachers from Aizawl City (31.58%) are Computer Technique teachers and second largest percentages of teachers (15.71%) are teachers of Computer Software Application and Office Secretaryship. No teacher from Aizawl City is found in Horticulture course.

Table 4.3.2: Age wise distribution of teachers

Age as on 2015	Course Wise Distribution of Teachers								
	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
below 25	0	0	0	0	0	0	0	0	0
26 to 30	5 (26.32)	2 (10.53)	1 (5.26)	2 (10.53)	3 (15.79)	2 (10.53)	3 (15.79)	1 (5.26)	19 (57.57)
31 to 35	4 (44.44)	2 (22.22)	1 (11.11)	0	0	0	1 (11.11)	1 (11.11)	9 (27.27)
36 to 40	1 (25)	0	0	0	0	1 (25)	2 (50)	0	4 (12.12)
41 and above	0	0	0	0	0	0	0	1 (100)	1 (3.03)

A cursory glance at the above table (4.3.2) shows that there is no teacher below 25 years and there are 3.03 per cent teachers who are above 41 years at the time of data collection. Majority of the teachers (57.57%) are between 26 to 30 years followed by 31 to 35 years (27.27%). There are few teachers (12.12%) between 36 to 40 years.

Between 26 to 30 years, the highest percentage of teachers (26.32%) is in Computer Technique. There are only 5.26 per cent of teachers in Office Secretaryship and others ranging from 5.26 per cent to 15.79 per cent teachers are other course teachers.

The highest percentage of teachers between 31 to 35 years (44.44%) is found in Computer Technique while there is no teacher in Automobile Engineering Technology, Medical Laboratory Technician and Horticulture. Other teachers between 11.11 to 22.22 per cent are other course teachers.

50 per cent teachers of Sericulture are between 36 to 40 years, 25 per cent teachers each are Computer Technique and Horticulture teachers. There is no teacher from other courses.

Above 41 years, 100 per cent teachers are found in Office Secretaryship. There is no teacher above 41 years in other courses.

Table 4.3.3: Gender wise distribution of teachers

Gender	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
M	8 (44.44)	4 (22.22)	0	1 (5.56)	2 (11.11)	1 (5.56)	2 (11.11)	0	18 (54.54)
F	2 (13.33)	0	2 (13.33)	1 (6.67)	1 (6.67)	2 (13.33)	4 (26.67)	3 (20)	15 (45.45)

Table 4.3.3 shows that male teachers (54.54%) are more than female teachers (45.45%). Computer Technique has the highest percentage of male teachers (*i.e.*, 44.44) per cent while Commercial Garment Design and Making and Office Secretaryship have no male teachers. Male teachers of other courses range from 5.56 to 22.22 per cent.

Sericulture has the highest percentage of female teachers (26.67%) while Computer Software Application has no female teacher. Female teachers of other courses range from 6.67 to 13.33 per cent.

Table 4.3.4: Teachers' academic record in HSLC

Educational Background Information		Course Wise Distribution of Vocational Teachers								
		Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
		No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Name of Board	MBSE	9 (28.12)	4 (12.5)	2 (6.25)	2 (6.25)	3 (9.38)	3 (9.38)	6 (18.75)	3 (9.38)	32 (96.97)
	CBSE	1 (100)	0	0	0	0	0	0	0	1 (3.03)
	Other	0	0	0	0	0	0	0	0	0
Year of Passing	1989 to 1995	2 (22.22)	0	1 (11.11)	0	0	1 (11.11)	3 (33.33)	2 (22.22)	9 (27.27)
	1996 to 2002	7 (46.67)	2 (13.33)	1 (6.67)	1 (6.67)	1 (6.67)	0	2 (13.33)	1 (6.67)	15 (45.45)
	2003 to 2009	1 (11.11)	2 (22.22)	0	1 (11.11)	2 (22.22)	2 (22.22)	1 (11.11)	0	9 (27.27)
Pass Possition	Distinction	1 (33.33)	0	0	1 (33.33)	0	0	1 (33.33)	0	3 (9.09)
	1st	5 (41.67)	2 (16.67)	0	0	2 (16.67)	2 (16.67)	1 (8.33)	0	12 (36.36)
	2nd	2 (22.22)	1 (11.11)	0	0	1 (11.11)	1 (11.11)	3 (33.33)	1 (11.11)	9 (27.27)
	3rd	2 (22.22)	1 (11.11)	2	1	0	0	1 (11.11)	2 (22.22)	9 (27.27)
	Rank Holder	0	0	0	0	0	0	0	0	0

A cursory glance at Table 4.3.4 apprises us that as high as 96.97 per cent teachers passed HSLC under MBSE whereas only 3.03 per cent teachers passed the same under CBSE.

The largest percentage of teachers passed HSLC way back in 1996 to 2002 and the rest 27.27 per cent each in 1989 to 1995 and 2003 to 2009 respectively.

Teachers who passed HSLC in I Division constitute the largest percentage (36.36%). Besides, 9.09 per cent passed in Distinction. The rest 27.27 per cent each passed in II and III Division. Those teachers who passed HSLC in Distinction are

spread in Computer Technique, Automobile Engineering Technology and Sericulture courses. Among the teachers with I Division in HSLC, the largest percentage (41.67%) is constituted by Computer Technique teachers, second largest percentage (16.67%) each by Computer Software Application, Medical Laboratory Technician and Horticulture teachers and the lowest percentage (8.33%) by Sericulture teachers.

Among the teachers passing HSLC in II Division, Sericulture teachers form the largest percentage (33.33%) followed by Computer Technique teachers forming 22.22 per cent.

Table 4.3.5: Teachers' academic record in HSSLC

Educational Background Information		Course Wise Distribution of Vocational Teachers								
		Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total
		No. & %	No. & %	No. & %	No. &%	No. & %	No. &%	No. & %	No. & %	No. & %
Name of Board	MBSE	7 (24.14)	4 (13.79)	2 (6.9)	2 (6.9)	3 (10.34)	3 (10.34)	6 (20.69)	2 (6.9)	29 (87.88)
	CBSE	0	0	0	0	0	0	0	0	0
	Other	3 (75)	0	0	0	0	0	0	1 (25)	4 (12.12)
Year of Passing	1991 to 1995	0	0	0	0	0	0	1 (50)	1 (50)	2 (6.06)
	1996 to 2000	3 (37.5)	0	1 (12.5)	0	0	1 (12.5)	2 (25)	1 (12.5)	8 (24.24)
	2001 to 2005	5 (27.78)	3 (16.66)	1 (5.56)	1 (5.56)	3 (16.66)	1 (5.56)	3 (16.66)	1 (5.56)	18 (54.55)
	2006 to 2010	2 (40)	1 (20)	0	1 (20)	0	1 (20)	0	0	5 (15.15)
Pass Possition	Distinction	0	0	0	0	0	0	0	0	0
	1st	2 (33.33)	2 (33.33)	0	0	1 (16.67)	1 (16.67)	0	0	6 (18.18)
	2nd	6 (31.58)	2 (10.53)	1 (5.26)	2 (10.53)	2 (10.53)	1 (5.26)	4 (21.05)	1 (5.26)	19 (57.58)
	3rd	2 (25)	0	1 (12.5)	0	0	1 (12.5)	2 (25)	2 (25)	8 (24.24)
	Rank Holder	0	0	0	0	0	0	0	0	0

A cursory glance at Table 4.3.5 reveals that 87.88 per cent teachers passed HSSLC under MBSE whereas only 12.12 per cent teachers passed the same under CBSE.

The largest percentage of teachers (54.55%) passed HSSLC in 2001 to 2005, another 24.24 per cent and 15.15 per cent in 1996 to 2000 and 2006 to 2010 respectively. A small percentage of teachers passed in 1991 to 1995.

Teachers who passed HSSLC in II Division constitute the largest percentage (57.58%). There are no teachers who passed HSSLC in Distinction. The rest 24.24 and 18.18 per cent passed in III and I Division respectively. Those teachers who passed HSLC in II Division are spread in all the courses. Among the teachers with I Division, 33.33 per cent each is constituted by Computer Technique and Computer Software Application and 16.67 per cent each by Medical Laboratory Technician and Horticulture.

Among the teachers passing HSLC in III Division, Computer Technique, Sericulture and Office Secretaryship form 25 per cent each and Commercial Garment Design and Making and Horticulture occupy 12.5 per cent each.

Table 4.3.6: Teachers' academic record in Bachelor Degree

Educational Background Information		Course Wise Distribution of Vocational Teachers								
		Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
		No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Name of Board	MZU	3 (23.08)	2 (15.38)	1 (7.69)	0	2 (15.38)	1 (7.69)	3 (23.08)	1 (7.69)	13 (39.39)
	NEHU	5 (41.67)	0	1 (8.33)	0	0	1 (8.33)	3 (25)	2 (16.67)	12 (36.36)
	Other	2 (25)	2 (25)	0	2 (25)	1 (12.5)	1 (12.5)	0	0	8 (24.24)
Year of Passing	1995 to 1999	0	0	0	0	0	0	1 (50)	1 (50)	2 (6.06)
	2000 to 2004	2 (28.57)	0	1 (14.29)	0	0	1 (14.29)	2 (28.57)	1 (14.29)	7 (21.21)
	2005 to 2009	7 (33.33)	3 (14.29)	1 (4.76)	1 (4.76)	3 (14.29)	2 (9.52)	3 (14.29)	1 (4.76)	21 (63.64)
	2010 to 2014	1 (33.33)	1 (33.33)	0	1 (33.33)	0	0	0	0	3 (9.09)
Other unibv	Distinction	0	0	0	1 (100)	0	0	0	0	1 (3.03)
	1st	5 (41.67)	2 (16.67)	0	0	3 (25)	1 (8.33)	1 (8.33)	0	12 (36.36)
	2nd	3 (17.65)	2 (11.76)	2 (11.76)	1 (5.88)	0	2 (11.76)	4 (23.53)	3 (17.65)	17 (51.52)
	3rd	2 (66.67)	0	0	0	0	0	1 (33.33)	0	3 (9.09)
	Rank Holder	0	0	0	0	0	0	0	0	0

Table 4.3.6 tells us that 39.39 per cent teacher passed Bachelor Degree under MZU, 36.36 per cent and 24.24 per cent under NEHU and other universities respectively.

The largest percentage of teachers (i.e., 63.64%) passed Bachelor Degree in 2005 to 2009 and the second largest percentage i.e., 21.21 passed in 2000 to 2004. A few percentages of 9.09 and 6.06 passed in 2010 to 2014 and 1995 to 1999 respectively.

The highest percentage of teachers (51.52%) passed bachelors degree in II Division and the second highest percentage (36.36%) passed in I Division. Few

teachers (9.09 %) passed in III Division while only 3.03 per cent passed in Distinction.

Teachers who passed Bachelor Degree in II Division are found in all the subjects except Medical Laboratory Technician. Teachers who passed in I Division are found in Computer Technique, Computer Software Application, Medical Laboratory Technician, Horticulture and Sericulture. The only teacher who passed in Distinction is in Automobile Engineering Technology.

Table 4.3.7: Teachers' academic record in Post-Graduate Degree

Educational Background Information		Course Wise Distribution of Vocational Teachers								
		Computer Technique (7 Teacher)	Computer Software Application (3 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (5 Teacher)	Office Secretaryship (2 Teacher)	Total (25 Teachers)
		No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
No. of Non-PG		3 (37.5)	1 (12.5)	0	2 (25)	0	0	1 (12.5)	1 (12.5)	8 (24.24)
Name of Board	MZU	0	1 (16.67)	0	0	0	3 (50)	1 (16.67)	1 (16.67)	6 (24)
	NEHU	0	0	0	0	0	0	0	1 (100)	1 (4)
	Other	7 (38.89)	2 (11.11)	2 (11.11)	0	3 (16.67)	0	4 (22.22)	0	18 (72)
Year of Passing	2000 to 2004	1 (25)	0	0	0	0	0	2 (50)	1 (25)	4 (16)
	2005 to 2009	3 (30)	1 (10)	2 (20)	0	0	0	3 (30)	1 (10)	10 (40)
	2010 to 2014	3 (27.27)	2 (18.18)	0	0	3 (27.27)	3 (27.27)	0	0	11 (44)
Pass Position	Distinction	0	0	1 (100)	0	0	0	0	0	1 (4)
	1st	5 (29.41)	3 (17.65)	1 (5.88)	0	3 (17.65)	2 (11.76)	2 (11.76)	1 (5.88)	17 (68)
	2nd	1 (16.67)	0	0	0	0	1 (16.67)	3 (50)	1 (16.67)	6 (24)
	3rd	1 (100)	0	0	0	0	0	0	0	1 (4)
	Rank Holder	0	0	0	0	0	0	0	0	0

A perusal of the above table (4.3.7) reveals that there are 75.76 per cent Post Graduate teachers and majority of them *i.e.,* 72 per cent have completed their Masters' Degree under the universities other than MZU and NEHU.

The largest percentage of teachers (i.e., 44%) passed in 2010 to 2014, 40 per cent passed in 2005 to 2009 and 16 per cent of them passed in 2000 to 2004.

Majority of the teachers (68%) passed in I Division, 24 per cent passed in II Division and 4 per cent each passed in Distinction and III Division respectively.

The only teacher who passed who passed Post Graduate degree in Distinction is a teacher of Commercial Garment Design and Making. Computer Technique constitutes the largest percentage of teachers passing in I Division followed by Computer Software Application and Medical Laboratory Technician which form 17.65 per cent each. Teachers passing in I Division are found in all the courses except Automobile Engineering Technology. Most teachers passing Post Graduate degree in II Division (50%) are in Sericulture and 16.67 per cent each are in Computer Technique, Horticulture and Office Secretaryship. While the only teacher passing in III Division is in Computer Technique.

Table 4.3.8: Teachers' educational qualification

Course Wise Distribution of Vocational Teachers																	
S. No.	**Computer Technique (10 Teachers)**		**Computer Software Application (4 Teachers)**		**Commercial Garment Design and Making (2 Teachers)**		**Automobile Engineering Technology (2 Teachers)**		**Medical Laboratory Technician (3 Teachers)**		**Horticulture (3 Teachers)**		**Sericulture (6 Teachers)**		**Office Secretaryship (3 Teachers)**	
	Qualification	**No. & %**	**Qualification**	**No. & %**	**Qualification**	**No. & %**	**Qualification**	**No. & %**	**Qualification**	**No. & %**	**Qualification**	**No. & %**	**Qualification**	**No. & %**	**Qualification**	**No. & %**
1	M.Sc (CS)	1 (10)	MCA	2 (50)	Master in FD	2 (100)	BE (MEC)	1 (50)	M.Sc (MLT)	3 (100)	M.Sc (EVS)	1 (33.33)	M.Sc	2 (33.33)	M.Com with DCA	1 (33.33)
2	MCA	4 (40)	M.Tech (CS)	1 (25)			B.Sc (DMEC)	1 (50)			M.Sc (HAMP)	2 (6.66)	B.Sc, PGDS 1 (16.67)	1 (16.67)	B.A (STENO)	1 (33.33)
3	B.Tech (CS)	2 (20)	BCA	1 (25)									M.Sc, PGDS	3 (50)	M.Com (DPIT)	1 (33.33)
4	BE (CSE)	1 (10)														
5	M.Sc (IT)	1 (10)														
6	M.Sc (PGDCA)	1 (10)														

Note : CSE (Computer Science & Engineering); CS (Computer Science); FD (Fashion Designing); MEC (Mechanical Engineering); HAMP (Horticulture, Aromatic and Medicinal Plants); PGDS (Post Graduate Diploma in Sericulture); EVS (Enviromental Science); DCA (Diploma in Computer Application); PDGCA (Post Graduate Diploma in Computer Application

The above table (4.3.8) shows the educational qualifications of different vocational teachers as follows:

Computer Technique: 40 per cent of teachers in Computer Technique course are Master in Computer Application, 20 per cent Bachelor of Technology and 10 per cent each are Master of Science with Post Graduate Diploma in Computer Application, Master of Science (Information Technology), Bachelor of Engineering (Computer Science & Engineering) and Master of Science (Computer Science).

All the Computer Technique teachers have the required educational qualification as per norms.

Computer Software Application: 50 per cent of teachers are Master in Computer Application, 25 per cent Master of Technology (Computer Science) and 25 per cent Bachelor of Computer Application.

All the Computer Software Application teachers have the required educational qualification as per norms.

Commercial Garment Design and Making: 100 per cent teachers are Master in Fashion Designing.

All the Commercial Garment Design and Making teachers have the required educational qualification as per the norms.

Automobile Engineering Technology: 50 per cent teachers are Bachelor of Engineering (Mechanical Engineering) and 50 per cent Bachelor of Science with Diploma in Mechanical Engineering.

All the Automobile Engineering Technology teachers have the required educational qualification as per the norms.

Medical Laboratory Technician: 100 per cent teachers are Master of Science (Medical Laboratory Technician).

All the Medical Laboratory Technician teachers have the required educational qualification as per the norms.

Horticulture: 33.33 per cent teachers are Master of Science (Environmental Studies) and 66.67 per cent Master of Science (HAMP).

All the Horticulture teachers have the required educational qualification as per the norms.

Sericulture: 33.33 per cent teachers are Master of Science; another 50 per cent teachers Master of Science with Post Graduate Diploma in Sericulture and 16.67 per cent teachers Bachelor of Science with Post Graduate Diploma in Sericulture.

All the Sericulture teachers have the required educational qualification as per the norms.

Office Secretaryship: 33.33 per cent are Master of Science with Diploma in Computer Application, other 33.33 per cent of teachers are Master of Science with Diploma in Information Technology and another 33.33 per cent of teachers are Bachelor of Arts with Stenography.

All the Office Secretaryship teachers have the required educational qualification as per the norms.

Table 4.3.9: Teachers' year of appointment

Year of Appointment	Year of Appointment and Course wise Distribution of Vocational Teachers								
	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
before 2006	1 (33.33)	0	0	0	0	1 (33.33)	0	1 (33.33)	3 (9.09)
2007	2 (50)	0	1 (25)	0	0	0	1 (25)	0	4 (12.12)
2008	0	1 (33.33)	0	0	1 (33.33)	0	1 (33.33)	0	3 (9.09)
2009	0	0	1 (100)	0	0	0	0	0	1 (3.03)
after 2010	7 (31.82)	3 (13.64)	0	2 (9.09)	2 (9.09)	2 (9.09)	4 (18.18)	2 (9.09)	22 (66.67)

It is noticeable from the above table (4.3.9) that majority of the teachers (66.67%) are appointed after 2010, 12.12 per cent are appointed in 2007, 9.09 per cent each were appointed before 2006 and 2008, and 3.03 per cent were appointed in 2009.

Among a few teachers who were appointed before 2006, 33.33 per cent each are Computer Technique, Horticulture and Office Secretaryship teachers. 50 per cent of Computer Technique teachers are appointed in 2007, each 25 per cent of Commercial Garment Designing and Making and Sericulture are also appointed in 2007.

In 2008, teachers are appointed in three courses *i.e.,* Computer Software Application, Medical Laboratory Technician and Sericulture with 33.33 per cent each. In 2009, newly appointed teachers are Commercial Garment Design and Making with 100 per cent.

The highest per cent of teachers appointed after 2010 are Computer Technique teachers with 31.82 per cent and no Computer Software Application teacher is appointed in this year. Other courses teachers appointed after 2010 range from 9.09 to 18.18 per cent.

Table 4.3.10: Teachers' nature of appointment

Nature of Appointment	Course Wise Distribution of Vocational Teacher								
	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Regular	0	0	0	0	0	0	0	1 (100)	1 (3.03)
Contract	8 (28.57)	3 (10.71)	2 (7.14)	1 (3.57)	3 (10.71)	3 (10.71)	6 (21.43)	2 (7.14)	28 (84.85)
Temporary	2 (50)	1 (25)	0	1 (25)	0	0	0	0	4 (12.12)
Part Time	0	0	0	0	0	0	0	0	0
Any Other	0	0	0	0	0	0	0	0	0

It is obvious from the above table (Table 4.3.10) that majority of the teachers (84.85%) are appointed on contract basis, 12.12 per cent are temporary teachers, 3.03 per cent are regular teachers, and there is no part time teacher. 100 per cent of teachers of Office Secretaryship are appointed on Regular basis and there is no regular teacher in other courses. Contract teachers are highest in Computer Technique with 28.57 per cent and lowest in Automobile Engineering Technology with 3.57 per cent. Other contract teachers ranging from 7.14 per cent to 21.43 per cent are teachers of other courses.

Temporary teachers are highest in Computer Technique with 50 per cent; 25 per cent each are Computer Software Application, and Automobile Engineering Technology teachers. There is no part time teacher in other courses.

Table 4.3.11: Teachers' teaching experience

Do you have teaching experience before working as a vocational teacher?	**Course Wise Distribution of Vocational Teachers**								
	Computer Technique (10 Teacher)	**Computer Software Application (4 Teacher)**	**Commercial Garment Design and Making (2 Teacher)**	**Automobile Engineering Technology (2 Teacher)**	**Medical Laboratory Technician (3 Teacher)**	**Horticulture (3 Teacher)**	**Sericulture (\6 Teacher)**	**Office Secretaryship (3 Teacher)**	**Total (33 Teachers)**
	No. & %	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**
Yes	5 (83.33)	1 (16.67)	0	0	0	0	0	0	6 (18.18)
No	5 (18.52)	3 (11.11)	2 (7.41)	2 (7.41)	3 (11.11)	3 (11.11)	6 (22.22)	3 (11.11)	27 (81.82)

A look at the above table (Table 4.3.11) shows that majority of the teachers (81.82%) do not have teaching experience before working as a vocational teacher. Among the teachers who have teaching experience (18.18%), 83.33 per cent are Computer Technique teachers and 16.67 per cent are Computer Software Application teachers. The rest of other courses teachers do not have teaching experiences.

Table 4.3.12: No. of teachers who have undergone trainings

Any Training Undergone?	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	6 (60)	1 (25)	0	1 (50)	1 (33.33)	1 (33.33)	4 (66.67)	1 (33.33)	15 (45.45)

The above table (Table 4.3.12) tells about the number and percentages of teachers who have undergone trainings:

Computer Technique: 60 per cent teachers of Computer Technique have undergone trainings. These training include Vocational training organised by SCERT attended by 20 per cent teachers, Refreshers Course at MZU attended by 10 per cent teachers, Trainings on Cyber Crime organised by NIELIT attended by 10 per cent teachers, Teacher's training programme in vocational guidance for the minority groups in North East states at Guwahati attended by 10 per cent teachers.

Computer Software Application: 25 per cent teachers of Computer Software Application have undergone Vocational Training at Guwahati.

Commercial Garment Design and Making: There are no teachers who have attended any kind of teachers' training.

Automobile Engineering Technology: 50 per cent teachers of Automobile Engineering Technology have attended Industrial Training Programme at Mumbai.

Medical Laboratory Technician: 33.33 per cent teachers of Medical Laboratory Technician have attended Vocational Training organised by SCERT.

Horticulture: 33.33 per cent teachers of Horticulture have attended Vocational Training organised by SCERT.

Sericulture: 66.67 per cent teachers of Sericulture have undergone trainings. These trainings include Post Graduate Diploma in Sericulture at West Bengal attended by 50 per cent teachers and Vocational Training attended by 16.67 per cent of teachers.

Office Secretaryship: 33.33 per cent teachers of Office Secretaryship have undergone One year course in Diploma in Information Technology.

Table 4.3.13: No. of teachers' paper publication

Any Publication?	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teacher)	Computer Software Application (4 Teacher)	Commercial Garment Design and Making (2 Teacher)	Automobile Engineering Technology (2 Teacher)	Medical Laboratory Technician (3 Teacher)	Horticulture (3 Teacher)	Sericulture (6 Teacher)	Office Secretaryship (3 Teacher)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
No	10 (100)	4 (100)	2 (100)	2 (100)	3 (100)	3 (100)	6 (100)	3 (100)	33 (100)

Table 4.3.14 reveals that 100 per cent teachers have not published any paper or book.

4.4. Problems Faced by Students of Vocational Courses

Problems faced by students of vocational courses are presented for analysis and interpretation under the following heads:

- Problems regarding the vocational course they pursued
- Problems related to facilities
- Problems with regard to practical work
- Problem regarding textbooks
- Problem with regard to content of the textbooks
- Problem related to teachers
- Problem of students relating to on-the-job training
- Problems of students relating to method of teaching

Table 4.4.1: Problems of students related to vocational courses pursued

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Worry about college admission and further studies	94 (30.82)	5 (1.64)	19 (6.23)	22 (7.21)	71 (23.28)	53 (17.38)	16 (5.25)	25 (8.20)	305 (49.35)
Worry about job placement	94 (42.73)	4 (1.82)	13 (5.91)	16 (7.27)	61 (27.73)	16 (7.27)	9 (4.09)	7 (3.18)	220 (35.60)
The course is not of my first choice	60 (48)	6 (4.80)	5 (4)	11 (8.80)	23 (18.40)	12 (9.60)	6 (4.80)	2 (1.60)	125 (20.23)
Thinking of changing my subject into general (Arts, Science, Commerce) stream	31 (44.93)	4 (5.80)	6 (8.7)	5 (7.25)	9 (13.04)	6 (8.70)	2 (2.90)	6 (8.70)	69 (11.17)
Not interested in the course	15 (45.45)	1 (3.03)	2 (6.06)	9 (27.27)	1 (3.03)	0	0	5 (15.15)	33 (5.34)
High admission fees	14 (40)	0	0	3 (8.57)	8 (22.86)	6 (17.14)	2 (5.71)	2 (5.71)	35 (5.66)
Other streams look down upon us	6 (21.43)	2 (7.14)	2 (7.14)	4 (14.29)	0	9 (32.14)	5 (17.86)	0	28 (4.53)

With regard to problems related to vocational courses pursued, Table 4.4.1 reveals that worry about college admission and further studies is the biggest problem among the vocational students which is cited by 49.35 per cent students. The next biggest problem is worry about job placement as cited by 35.60 per cent students. Other problems cited by 20.33 per cent and below in order of their intensity are:

1) The course not of their first choice
2) Thinking of changing the subject into general stream
3) High admission fee
4) Not interested in the course and
5) Other streams looking down upon us

Out of 49.35 per cent of students who are worried about college admission and further studies, 30.82 per cent are from Computer Technique, 23.28 per cent from Medical Laboratory Technician and 17.38 per cent from Horticulture.

Students who are worry about job placement comprising of 35.60 per cent of vocational students are also mainly from Computer Technique and Medical Laboratory Technician who form 42.73 per cent and 27.73 per cent respectively of students with this problem.

Table 4.4.2: Problems of students related to facilities

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Insufficient equipments	92 (36.80)	8 (3.20)	15 (6)	32 (12.80)	54 (21.60)	16 (6.40)	6 (2.40)	27 (10.80)	250 (40.45)
Insufficient furniture for all the students	24 (28.57)	0	4 (4.76)	9 (10.71)	2 (2.38)	17 (20.24)	2 (2.38)	26 (30.95)	84 (13.59)
Congested classrooms	74 (41.11)	0	4 (2.22)	30 (16.67)	40 (22.22)	11 (6.11)	3 (1.67)	18 (10)	180 (29.13)
Irregular power supply	104 (52)	3 (1.50)	10 (5)	9 (4.50)	42 (21)	19 (9.50)	10 (5)	5 (1.50)	200 (32.36)

Table 4.4.2 shows the problems of students relating to facilities. Insufficient equipments is a problem for 40.45 per cent of students, irregular power supply for 32.36 per cent, congested classroom for 29.13 per cent and insufficient furniture for 13.59 per cent of the students. However, these problems appear to be not that serious as majority of the students do not mention them.

The highest percentage of students stating the problems of insufficient equipments, congested classrooms and irregular power supply is from Computer Technique course whereas the highest percentage of students citing insufficient furniture for all the students is from Office Secretaryship.

Table 4.4.3: Problems of students related to practical work

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Too congested practical rooms/ workshop/ laboratories	42 (30)	1 (0.71)	6 (4.29)	30 (21.43)	23 (16.43)	9 (6.43)	3 (2.14)	26 (18.57)	140 (22.65)
Insufficient no. of practical classes conducted	102 (43.40)	5 (2.13)	2 (0.85)	26 (11.06)	30 (12.77)	43 (18.30)	6 (2.55)	21 (8.94)	235 (38.03)
Lack of required space for doing practical work	27 (21.09)	1 (0.78)	15 (11.72)	14 (10.94)	32 (25)	22 (17.19)	6 (4.69)	11 (8.59)	128 (20.71)
Irregular supply of electricity	93 (57.06)	1 (0.61)	7 (4.29)	7 (4.29)	36 (22.09)	8 (4.91)	8 (4.91)	3 (1.84)	163 (26.38)

With regard to problems related to practical work, Table 4.4.3 indicates that insufficient number of practical classes conducted is stated as a problem by 38.03 per cent, irregular supply of electricity by 26.38 per cent, too congested practical room/ laboratories by 22.65 per cent, and lack of required space for doing practical work by 20.71 per cent. The data imply that these problems are not faced by majority of the students of vocational courses.

Out of the students facing problems related to practical work, the highest percentages is from Computer Technique course and Computer Software Application is the course having the least number of students facing the problems.

Table 4.4.4: Problems of students related to textbooks

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Textbooks for all subjects not available	53 (27.89)	2 (1.05)	7 (3.68)	8 (4.21)	27 (14.21)	55 (28.95)	12 (6.32)	26 13.68)	190 (30.74)
Textbooks need to be procured from outside Mizoram	30 (18.18)	2 (1.21)	10 (6.06)	8 (4.85)	43 (26.06)	55 (33.33)	14 (8.48)	3 (1.82)	165 (26.70)
Do not have textbook	12 (8.05)	3 (2.01)	4 (2.68)	11 (7.38)	57 (38.26)	48 (32.21)	14 (9.40)	0	149 (24.11)
Costly textbooks	94 (46.53)	6 (2.97)	11 (5.45)	17 (8.42)	56 (27.27)	13 (6.44)	3 (1.49)	2 (0.99)	202 (32.69)
Textbooks not available in time	67 (45.89)	0	2 (1.37)	18 (12.33)	38 (26.03)	18 (12.33)	1 (0.68)	2 (1.37)	146 (23.62)
Textbooks not available in the local market	37 (37.37)	1 (1.01)	5 (5.05)	9 (9.09)	23 (23.23)	16 (16.16)	8 (8.08)	0	99 (16.02)

A cursory glance at Table 4.4.4 shows that related to the textbook, a costly textbook is the highest problem faced by 32.69 per cent of students. 'Textbooks not available in all the subjects' is the second highest problem faced by 30.74 per cent of students and the problem 'textbooks need to be procured from outside Mizoram' is faced by 26.70 per cent of the students. Other problems such as 'do not have textbooks', 'textbooks not available in time' and 'textbooks not available in the market' are faced by 24.11 per cent, 23.62 per cent and 16.02 per cents students respectively.

Data in the above table also imply that problems related to textbooks are not faced by majority of the students of vocational subjects.

Among the students stating the problems related to textbooks, most of them are those pursuing courses of Computer Technique, Medical Laboratory Technician and Horticulture.

Table 4.4.5: Problems of students related to content of the textbook

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Unavailability of textbooks written in Mizo	62 (31.63)	9 (4.59)	10 (5.10)	29 (14.80)	57 (29.08)	9 (4.59)	13 (6.63)	7 (3.57)	196 (31.72)
Contents are difficult to understand	76 (41.30)	3 (1.63)	9 (4.89)	17 (9.24)	56 (30.43)	9 (4.89)	5 (2.72)	9 (4.89)	184 (29.77)
Textbooks do not cover the whole syllabus	15 (41.67)	1 (2.78)	0	4 (11.11)	4 (11.11)	3 (8.33)	6 (16.67)	3 (8.33)	36 (5.83)
Most of the contents are not related to the syllabus	11 (47.83)	2 (8.70)	0	1 (4.35)	4 (17.39)	3 (13.04)	2 (8.70)	0	23 (3.72)
Contents do not help in developing my/our skills	11 (52.38)	0	2 (9.52)	4 (19.05)	1 (4.76)	2 (9.52)	0	1 (4.76)	21 (3.40)

Relating to contents of the textbooks, Table 4.4.5 reveals that unavailability of textbooks written in Mizo is the highest problem faced by 31.72 per cent of students. Contents of the textbooks are difficult to understand for 29.77 per cent and 5.83 per cent find that textbooks do not cover the whole syllabus. For 3.72 per cent of students most of the contents are not related to the syllabus and for 3.40 per cent of students, the contents do not help in developing their skills.

Data in the above table indicate that majority of the vocational students do not face the problems related to contents of the textbooks.

Students pursuing Computer Technique course are mostly the ones who state various problems related to contents of textbooks. The next largest numbers of students facing these problems are those pursuing Medical Laboratory Technician. Only small percentages of students from other vocational courses mention the problems.

Table 4.4.6: Problems of students related to teacher

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Insufficient number of teachers	5 (10.87)	3 (6.520	0	1 (2.17)	2 (4.35)	20 (43.48)	15 (32.61)	0	46 (7.44)
Irregularity of teacher in taking class	42 (37.50)	6 (5.36)	2 (1.79)	4 (3.57)	9 (8.04)	39 (84.83)	4 (3.57)	6 (5.36)	112 (18.12)
Unfriendly attitude of teachers towards students	47 (37.01)	2 (1.57)	9 (7.09)	11 (8.66)	31 (24.41)	18 (14.17)	1 (0.79)	8 (6.30)	127 (20.55)

The above table (Table 4.4.6) reveals that the highest problem that the students face related to teacher is unfriendly attitude of teachers towards students mentioned by 20.55 per cent. Irregularity of teacher in taking class is the second highest problem stated by 18.12 per cent of teachers and for 7.44 per cent of students, insufficient number of teachers is a problem.

Looking at the percentages of students stating the problems related to teachers, it can be inferred that there exists no serious problem related to teachers of vocational courses.

Out of the few students claiming to have problems related to teachers, students of Horticulture constitutes the highest percentage who mention irregularity of teachers in taking classes and insufficient number of teachers as prominent problems.

Table 4.4.7: Problems of students related to on-the-job training centre

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
The centre too far from school	20 (21.98)	0	4 (4.40)	6 (6.59)	10 (10.99)	33 (36.23)	6 (6.59)	12 (13.19)	91 (14.72)
The training centre not well equip-ped	33 (38.82)	1 (1.18)	2 (2.35)	14 (16.47)	6 (7.06)	24 (28.24)	3 (3.53)	2 (2.35)	85 (13.75)

It is noticeable from Table 4.4.7 that a major problem of students relating to on-the-job training is that the training centre is too far from school for 14.72 per cent of the students. For 13.75 per cent of students, their problem is that the training centre is not well equipped.

The courses which have the two largest percentages of students having problems related to on-the-job training centre are Computer Technique and Horticulture. For Computer Technique students, 'the training centre not well-equipped' is the biggest problem followed by 'the centre too far from school', and vice versa for Horticulture students.

Data in the above table indicate that problem related to on-the-job training centre is not a big problem as majority of the students are free from this.

Table 4.4.8: Problems of students related to methods of teaching

Problem	Course Wise Distribution of Vocational Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Time allocated for practical class is not enough	95 (42.41)	3 (1.34)	4 (1.79)	29 (12.95)	48 (21.43)	15 (6.70)	13 (5.80)	17 (7.59)	224 (36.25)
Theory class is not helpful enough to understand the concept	32 (30.48)	6 (5.71)	10 (9.52)	5 (4.76)	32 (30.48)	12 (11.43)	0	8 (7.62)	105 (16.99)
Difficult to understand the way the teachers teach us	64 (48.12)	5 (3.76)	1 (0.75)	12 (9.02)	32 (24.06)	11 (8.27)	1 (0.75)	7 (5.26)	133 (21.52)
The methods of teaching adopted by the teachers are not helpful/ effective enough	14 (27.45)	6 (11.76)	0	6 (11.76)	8 (15.69)	12 (23.53)	1 (1.96)	4 (7.84)	51 (8.25)
Practical class is not helpful enough to develop skills	23 (39.66)	4 (6.90)	2 (3.45)	10 (17.24)	8 (13.79)	6 (10.34)	2 (3.45)	3 (5.17)	58 (9.39)
Time allocated for theory class is not enough	21 (38.18)	2 (3.64)	5 (9.09)	4 (7.27)	9 (16.36)	14 (25.45)	0	0	55 (8.90)
Textbook is not available, so spent the whole class taking notes	9 (45)	1 (5)	2 (10)	1 (5)	3 (15)	4 (20)	0	0	20 (3.24)

The above table (Table 4.4.8) shows that relating to the method of teaching, 36.25 per cent of the students face problem as time allocated for practical class is not enough and 21.52 per cent of students find it difficult to understand the way their teachers teach them. For 16.99 per cent of students, theory class is not helpful to understand the concept and practical class is not helpful enough to develop their skills for 9.39 per cent. Time allocated for theory class is not enough for 8.90 per cent of students and for 8.25 per cent of students, the methods of teaching adopted by the

teachers are not helpful/ effective enough. A few per cent of students have problem due to unavailability of textbook and as they have to spent the whole class taking notes.

In the meantime, it can be inferred from the above table that majority of the students do not face any problems relating to methods of teaching.

As a whole, students having problems related to methods of teaching are mainly from Computer Technique, Medical Laboratory Technician and Horticulture.

Table 4.4.9: Problems most frequently stated by students

S.No.	Areas of Problems of Students	Problems most frequently stated by Students	%
1	Problems of Students Related to Vocational Courses Pursued	Worry about college admission and further studies	49.35
2	Problems of Students Related to Facilities	Insufficient equipment	40.45
3	Problems of Students Related to Practical Work	Insufficient no. of practical classes conducted	38.03
4	Problems of Students Related to Textbooks	Textbooks for all subjects not available	32.69
5	Problems of Students Related to Content of the Textbook	Unavailability of textbooks written in Mizo	31.72
6	Problems of Students Related to Teacher	Unfriendly attitude of teachers towards students	20.55
7	Problems of Students Related to On-the-job Training Centre	The centre is too far from school	14.72
8	Problems of Students Related to Methods of Teaching	Time allocated for practical class is not enough	36.25

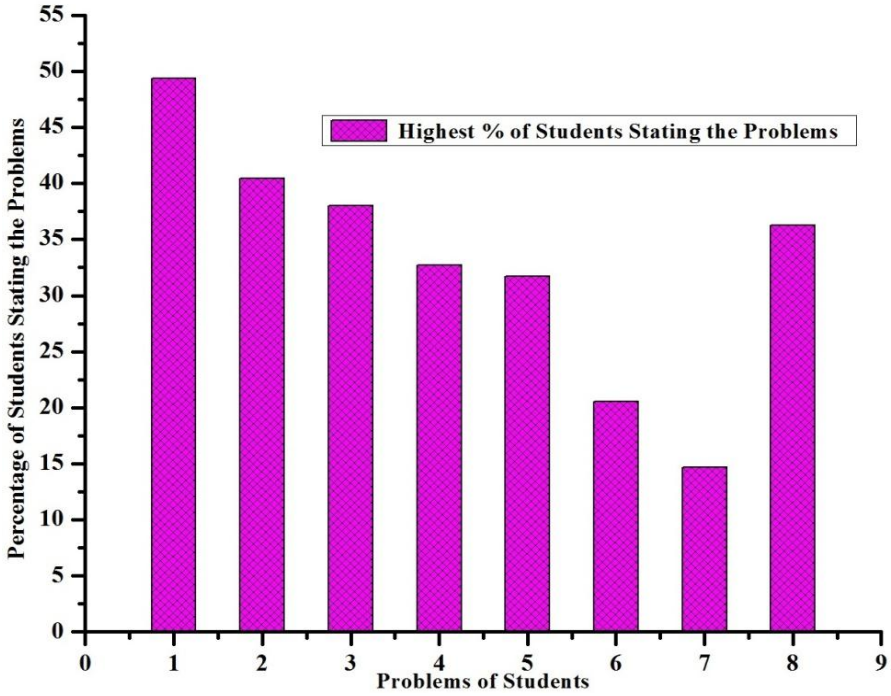

Figure 5: Problems most frequently stated by students

Table 4.4.9 and Figure 5 show the problems most frequently stated by students in each area of problems. It is clear that most of the students are worrying about college admission and further studies.

Table 4.4.10: Overall top 10 problems stated by students

S.No.	Top 10 Problems of Students	%
1	Worry about college admission and further studies	49.35
2	Insufficient equipment	40.45
3	Insufficient no. of practical classes conducted	38.03
4	Time allocated for practical class is not enough	36.25
5	Worry about job placement	35.6
6	Costly textbooks	32.69
7	Irregular power supply	32.36
8	Unavailability of textbooks written in Mizo	31.72
9	Textbooks for all subjects not available	30.74
10	Contents are difficult to understand	29.77

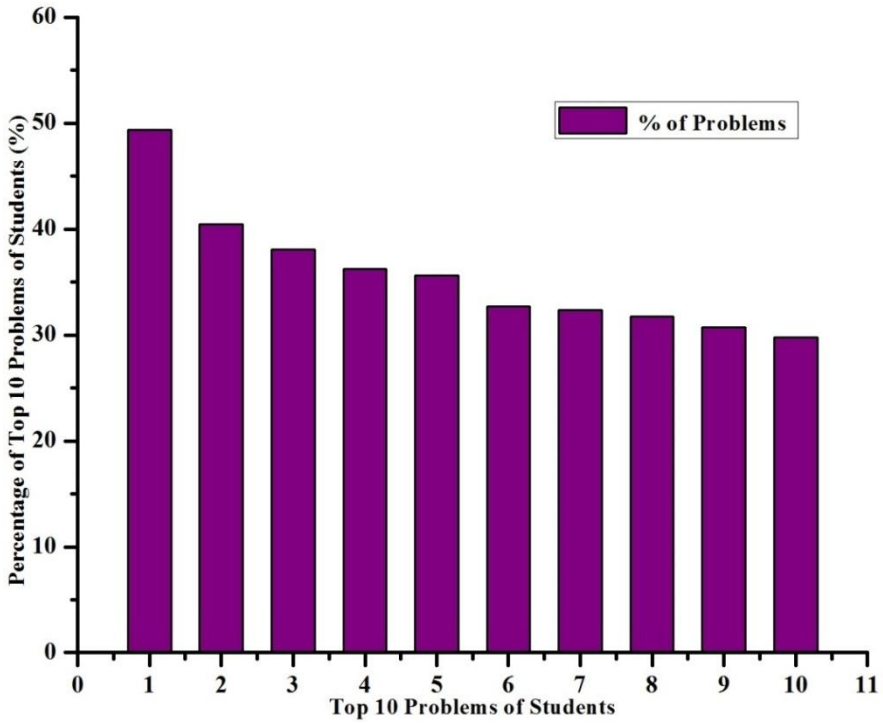

Figure 6: Overall top 10 problems stated by students

Table 4.4.10 and Figure 6 show the overall top 10 problems stated by students. The percentages of students stating these problems range from 29.77 per cent to 49.35 per cent.

4.5 Problems Faced by Teachers of Vocational Courses

Problems faced by teachers of vocational courses are presented for analysis and interpretation under the following heads:

- Problems related to salary
- Problems related to insufficient number of vocational teacher
- Problems related to facilities
- Problems related to practical workers
- Problems related to equipment
- Problems related to students
- Problems faced relating to study materials for teaching theory
- Problems with regard to contents of the textbooks
- Problems faced in transacting the skills

Table 4.5.1: Problems of teachers related to salary

Problem Faced	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Salary not at par with that of the general courses teachers	4 (36.36)	2 (18.18)	0	1 (9.09)	0	1 (9.09)	2 (18.18)	1 (9.09)	11 (33.33)
Irregular payment of salary	7 (35)	4 (20)	2 (10)	0	2 (10)	2 (10)	3 (15)	0	20 (60.61)

The above table (Table 4.5.1) shows that 60.61 per cent teachers face problems due to irregular payment of salary and 33.33 per cent teachers take their salary not at par with that of the general courses teachers as a problem.

Among the teachers who face problems due to irregular payment of salary, 35 per cent are Computer Technique teachers while teachers of Automobile Engineering Technology and Office Secretaryship have no problem at all. Other course teachers stating these problems range from 10 to 20 per cent.

Salary is not at par with that of the general teachers is pointed out by 36.36 per cent teachers of Computer Technique and 9.09 to 18.18 per cent of other course teachers except teachers of Commercial Garment Design & Making and Medical Laboratory Technician.

Table 4.5.2: Problems of teachers related to insufficient number of vocational teachers

Problem Faced	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Work load too heavy	5 (22.73)	4 (18.18)	0	0	3 (13.64)	3 (13.64)	4 (18.18)	3 (13.64)	22 (66.67)
Have to teach the papers in which I am not confident	1 (14.29)	2 (28.57)	2 (28.57)	1 (14.29)	0	0	1 (14.29)	0	7 (21.21)
Cannot attend any training	1 (33.33)	1 (33.33)	0	0	0	0	1 (33.33)	0	3 (9.09)

As shown in the above table (Table 4.5.2) problems related to insufficient number of vocational teachers, 66.67 per cent of teachers have problems of heavy workload, 21.21 per cent have to teach the papers in which they are not confident and 9.09 per cent face difficulty as they cannot attend any training.

Among the teachers whose workload is too heavy, 22.73 per cent is Computer Technique teachers, 13.64 per cent to 18.18 per cent are other course teachers. Teachers of Commercial Garment Design and Making and Automobile Engineering Technology have no problems in this regard.

Each 28.57 per cent teachers of Computer Software Application and Commercial Garment Design and Making and each 14.29 per cent teachers of Computer Technique, Automobile Engineering Technology and Sericulture have to teach the papers in which they are not confident.

Each 33.33 per cent teachers of Computer Technique, Computer Software Application and Sericulture face problems as they cannot attend any training.

As a whole, 'workload is too heavy' is a prominent problem as high percentage (66.67%) of teachers claims to have too heavy workload. Again, the highest percentage of teachers claiming to have this problem comes from Computer Technique.

Table 4.5.3: Problems of teachers related to facilities

Problem Faced	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Irregular power supply	7 (43.8)	2 (12.5)	2 (12.5)	2 (12.5)	2 (12.5)	0	0	1 (6.3)	16 (48.48)
Electric wiring not in good condition	4 (40)	1 (10)	0	0	2 (20)	3 (30)	0	0	10 (30.30)
Congested classroom	4 (26.7)	2 (13.3)	1 (6.7)	2 (13.3)	2 (13.3)	3 (20)	1 (6.7)	0	15 (45.45)
Insufficient furniture for all the students	4 (40)	0	1 (10)	1 (10)	1 (10)	2 (20)	1 (10)	0	10 (30.30)

A look at Table 4.5.3 tells that 48.48 per cent teachers face difficulty due to irregular power supply, 45.45 per cent due to congested classroom, and 30.30 per cent each due to electric wiring are not in good condition and insufficient furniture for all the students.

Irregular power supply is a problem for a high percentage i.e. 43.8 teachers of Computer Technique, whereas it is not a problem at all for teachers of Horticulture and Sericulture.

Teachers having problems due to congested classroom are 26.7 per cent of Computer Technique and 6.7 per cent to 20 per cent teachers of other courses. Office Secretaryship teachers have no problem.

Electric wiring not in a good condition is a problem for 40 per cent teachers of Computer Technique, 30 per cent teachers of Horticulture, 20 per cent teachers of Medical Laboratory Technician and 10 per cent teachers of Computer Software Application.

As a whole, Computer Technique teachers constitute the highest percentages of teachers stating problems related to facilities.

Table 4.5.4: Problems of teachers related to practical work

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Classrooms too small for practical work	4 (33.33)	2 (16.67)	0	2 (16.67)	0	3 (25)	0	1 (8.33)	12 (36.36)
No sufficient space for doing practical work	3 (50)	0	0	1 (16.67)	1 (16.67)	1 (16.67)	0	0	6 (18.18)
Practical works cannot be done due to irregular supply of electricity	5 (41.67)	2 (16.67)	1 (8.33)	1 (8.33)	2 (16.67)	0	1 (8.33)	0	12 (36.36)
Insufficient furniture for all the students	4 (44.44)	0	1 (11.11)	1 (11.11)	1 (11.11)	0	1 (11.11)	1 (11.11)	9 (27.27)

Relating to the problems of practical work, Table 4.5.4 shows that 36.36 per cent of teachers have problems due to small classrooms for doing practical work. Again 36.36 per cent teachers cannot do practical work due to irregular power supply, 27.27 per cent face problems due to insufficient furniture for all the students. For 18.18 of teachers no sufficient space for doing practical work is the problem.

For 33.33 per cent teachers of Computer Technique, each 16.67 per cent teachers of Computer Software Application and Automobile Engineering Technology, 25 per cent teachers of Horticulture and 8.33 per cent teachers of Office Secretaryship, classrooms are too small for practical work.

A high percentage of Computer Technique teachers *i.e.*, 41.67, low percentages teachers of other courses ranging from 8.33 to 16.67 per cent face difficulty in doing practical work due to irregular power supply whereas teachers of Horticulture and Sericulture are free from this problem.

Insufficient furniture creates a problem for 44.44 per cent teachers of Computer Technique and 11.11 per cent of each teacher of other courses excluding Computer Software Application and Horticulture.

No sufficient space for doing practical work is a problem for 50 per cent teachers of Computer Technique and 16.67 per cent each of teachers of Automobile Engineering Technology, Medical Laboratory Technician and Horticulture.

As a whole, teachers having problems related to practical work are mostly teachers of Computer Technique.

Table 4.5.5: Problems of teachers related to equipments

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Equipments are not sufficient for all the students	6 (30)	1 (5)	2 (10)	2 (10)	2 (10)	3 (15)	2 (10)	2 (10)	20 (60.61)
Qualities of the available equipments are not good	5 (35.71)	4 (28.57)	0	1 (7.14)	1 (7.14)	2 (14.29)	0	1 (7.14)	14 (42.42)
The available equipments do not last long	3 (42.86)	1 (14.29)	0	1 (14.29)	0	1 (14.29)	0	1 (14.29)	7 (21.21)
The required equipments are not available in time	1 (16.67)	0	0	1 (16.67)	0	2 (33.33)	2 (33.33)	0	6 (18.18)
The available equipments need frequent replacement	5 (33.33)	3 (20)	2 (13.33)	1 (6.67)	0	2 (13.33)	0	2 (13.33)	15 (45.45)
Replace the equipments with own expenses sometime	4 (44.44)	0	1 (11.11)	0	0	2 (22.22)	1 (11.11)	1 (11.11)	9 (27.27)
The required equipments are not available in the local market	0	0	2 (33.33)	1 (16.67)	0	3 (50)	0	0	6 (18.18)
The required equipments are not available in the State capital market	0	1 (100)	0	0	0	0	0	0	1 (3.03)

From Table 4.5.5, we find that insufficient equipment for all the students is the biggest problem as a high percentage of teachers (60.61%) mention it. The need of frequent replacement of the available equipments is a problem for 45.45 per cent teachers and bad qualities of the available equipments is a problem for 42.42 per cent teachers.

For 27.27 per cent of teachers, replacing the equipments with their own expense sometimes is a problem, 21.21 per cent of teachers also pointed out that the available equipments do not last long. 18.18 per cent of teachers have problems as the required equipments are not available in time and are not available in the local market. For a few per cent of teachers *i.e.*, 3.03, the required equipments are not available in the State capital market. These problems are not prominent as the percentages of teachers of various vocational courses citing them are low ranging from 3.03 per cent to 27.27 per cent.

Among the teachers facing various problems related to equipments, Computer Technique teachers constitute the largest number or the highest percentage. Teachers of other vocational courses form a small percentage for each specific problem related to equipment.

Table 4.5.6: Problems of teachers relating to students

Problem	Course Wise Distribution Of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Students wanting to change their subjects to other streams	3 (15)	3 (15)	2 (10)	2 (10)	3 (15)	2 (10)	2 (10)	3 (15)	20 (60.61)
Students dropping out	2 (20)	1 (10)	1 (10)	1 (10)	1 (10)	0	1 (10)	3 (30)	10 (30.30)

The above table (Table 4.5.6) reveals that 60.61 per cent teachers face problem as there are some students who want to change their subjects to other stream. 30.30 per cent teachers also have a problem of students dropping.

Students wanting to change their subjects are a problem for each 15.15 per cent teachers of Computer Technique, Computer Software Application, Medical Laboratory Technician and Office Secretaryship and each 10 per cent teachers of

Commercial Garment Design and Making, Automobile Engineering Technology, Horticulture and Sericulture.

All the course teachers ranging from 10 per cent to 30 per cent teachers excluding Horticulture teachers have a problem of students dropping out.

Table 4.5.7: Problems of teachers related to study materials for teaching theory

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Textbooks not available in the local market	7 (35)	1 (5)	2 (10)	0	1 (5)	3 (15)	4 (20)	2 (10)	20 (60.61)
Textbooks need to be procured from outside Mizoram	4 (28.57)	1 (7.14)	1 (7.14)	1 (7.14)	2 (14.29)	2 (14.29)	3 (21.43)	0	14 (42.42)
Textbooks are too costly	1 (16.67)	1 (16.67)	0	0	0	3 (50)	1 (16.67)	0	6 (18.18)
Textbooks do not cover the whole syllabus	5 (38.46)	2 (15.38)	1 (7.69)	1 (7.69)	0	2 (15.38)	2 (15.38)	0	13 (39.39)

Relating to the study materials for teaching theory, we can find from Table 4.5.7 that 60.61 per cent of teachers face the problem of unavailability of textbooks in the local market. Textbooks need to be procured from outside Mizoram is a problem for 42.42 per cent of teachers. For 39.39 per cent of teachers, textbooks not covering the whole syllabus and for 18.18 per cent of teachers, textbooks are too costly are problems.

In each specific problem faced by teachers related to study materials for teaching, Computer Technique contributes the highest percentage of teachers stating it.

Table 4.5.8: Problems of teachers related to contents of the textbooks/ books

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Contents do not help in developing the skills of the learner	1 (33.33)	1 (33.33)	0	0	0	1 (33.33)	0	0	3 (9.09)
Most of the contents are not related to the syllabus	2 (33.33)	0	2 (33.33)	0	0	1 (16.67)	1 (16.67)	0	6 (18.18)
Contents are difficult to understand	0	1 (50)	1 (50)	0	0	0	0	0	2 (6.06)
Unavailability of textbooks written in Mizo	2 (28.57)	0	1 (14.29)	0	1 (14.29)	2 (28.57)	1 (14.29)	0	7 (21.21)

Analyzing the above table (Table 4.5.8) relating to problems of contents of textbooks, it is found that 21.21 per cent of teachers face the problem of unavailability of textbooks written in Mizo and 18.18 per cent of teachers face the problem of contents not related to the syllabus. For 9.09 per cent of teachers, contents of the textbooks do not help in developing the skills of the learner and for 6.06 per cent, contents of the textbooks that are difficult to understand becomes a problem.

We can infer from data in the table that teachers' problems related to contents of textbooks are so minor that only small percentages of teachers from various vocational courses make mention of these problems.

Table 4.5.9: Problems of teachers in transacting the skills

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Large size of the class creates pro-blem in tea-ching practical	3 (75)	0	0	1 (25)	0	0	0	0	4 (12.12)
The available teaching aids do not meet the requirements	3 (33.33)	0	0	1 (11.11)	0	3 (33.33)	1 (11.11)	1 (11.11)	9 (27.27)
Irregular elec-tricity in the classroom crea-tes problems	5 (62.50)	2 (25)	0	1 (12.50)	0	0	0	0	8 (24.24)
Weakness of students in Eng-lish	5 (23.81)	3 (14.29)	2 (9.52)	1 (4.76)	0	3 (14.29)	4 (19.05)	3 (14.29)	21 (63.64)

Table 4.5.9 reveals that as many as 63.64 per cent of teachers of vocational subjects face the problem in transacting the skills owing to students' weakness in English. The second highest problem is the available teaching aids that do not meet the requirements as mentioned by 27.27 per cent of teachers. Irregular electricity in the classroom creates problems for 24.24 per cent teachers and large size of the class creates problem in teaching for 12.12 per cent of teachers.

For all the course teachers ranging from 4.76 per cent to 23.81 per cent excluding teachers of Medical Laboratory Technician weakness of students in English is a problem. The available teaching aids do not meet the requirement and is a problem for each 33.33 per cent teachers of Computer Technique and Horticulture. It also creates a problem for each 11.11 per cent teachers of Automobile Engineering Technology, Sericulture and Office Secretaryship.

A high percentage *i.e.*, 62.50 per cent teachers of Computer Technique, 25 per cent teachers of Computer Software Application and Automobile Engineering Technology face problem in transacting the skills due to irregular electricity in the

classroom. Large size of the class is a problem mainly for teachers of Computer Technique who form 75 per cent and for teachers of Automobile Engineering Technology who constitute 25 per cent of teachers facing this particular problem.

Table 4.5.10: Problems of teachers related to on-the-job training

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
The training centre is not well equipped	5 (41.67)	1 (8.33)	1 (8.33)	2 (16.67)	0	1 (8.33)	0	2 (16.67)	12 (36.36)
The centre is too far from school	2 (25)	1 (12.50)	0	0	0	2 (25)	3 (37.50)	0	8 (24.24)

With regard to the problems of teachers relating to on-the-job training, table 4.5.10 tells that the training centre that is not well equipped is a problem for 36.36 per cent teachers. Out of which the highest percentage *i.e.*, 41.67 per cent is constituted by teachers of Computer Technique.

For 24.24 per cent of teachers, the centre too far from school is a problem of which 37.50 per cent is constituted by teachers of Sericulture.

The table indicates that majority of vocational teachers do not face any problem related to On-the-job training.

Table 4.5.11: Problems of teachers related to job placement

Problem	Course Wise Distribution of Vocational Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Plus 2 level is not accepted/ qualified in many jobs	5 (29.41)	2 (11.76)	0	2 (11.76)	3 (17.65)	3 (17.65)	1 (5.88)	1 (5.88)	17 (51.52)
The students are too young to be employed in many jobs	2 (33.33)	1 (16.67)	0	0	1 (16.67)	2	0	0	6 (18.18)
Job opportunities are very limited in Mizoram as the state is backward in industry	4 (22.22)	1 (5.56)	2 (11.11)	2 (11.11)	1 (5.56)	3 (16.67)	4 (22.22)	1 (5.56)	18 (54.55)
Most passed out students are not mature and fit enough to seek jobs outside the state	1 (16.67)	0	1 (16.67)	1 (16.67)	0	2 (33.33)	1 (16.67)	0	6 (18.18)

The above table (Table 4.5.11) reveals that in connection with job placement, the majority teachers *i.e.*, 54.55 per cent mention that job opportunities are very limited in Mizoram as the state is backward in industry. The second highest problem stated by 51.52 per cent of teachers is that plus 2 level is not accepted in many jobs. Other problems like the 'students are too young to be employed in many jobs' and 'most passed out students are not mature and fit enough to seek jobs outside the state' are quoted by 18.18 per cent of teachers respectively.

Teachers of Computer Technique and Sericulture constitute the largest percentages (22.22% respectively) of teachers highlighting 'very limited job opportunities in Mizoram' as the problem. Again, for the problem, 'plus 2 level not accepted/ qualified in many jobs', the highest percentage of teachers stating this is from teachers of Computer Technique.

These two problems are considered to be prominent as more than 50 per cent of the teachers of vocational subjects mention them. Other problems are negligible as they are problem for only 18.18 per cent of vocational teachers.

Table 4.5.12: Problems most frequently stated by teachers

S.No.	Area Of Problems Of Teachers	Problems Most Frequently Stated By Teachers	%
1	Problems of Teachers Related to Salary	Irregular payment of salary	60.61
2	Problems of Teachers Related to Insufficient Number of Vocational Teachers	Work load too heavy	66.67
3	Problems of Teachers Related to Facilities	Irregular power supply	48.48
4	Problems of Teachers Related to Practical Work	Classrooms too small for practical work	36.36
5	Problems of Teachers Related to Equipments	Equipments are not sufficient for all the students	60.61
6	Problems of Teachers Relating to Students	Students wanting to change their subjects to other streams	60.61
7	Problems of Teachers Related to Study Materials for Teaching Theory	Textbooks not available in the local market	60.61
8	Problems of Teachers Related to Contents of the Textbooks/ books	Unavailability of textbooks written in Mizo	21.21
9	Problems of Teachers in Transacting the Skills	Weakness of students in English	63.64
10	Problems of Teachers Related to On-the-job training	The training centre is not well equipped	36.36
11	Problems of Teachers Related to Job Placement	Job opportunities are very limited in Mizoram as the state is backward in industry	54.55

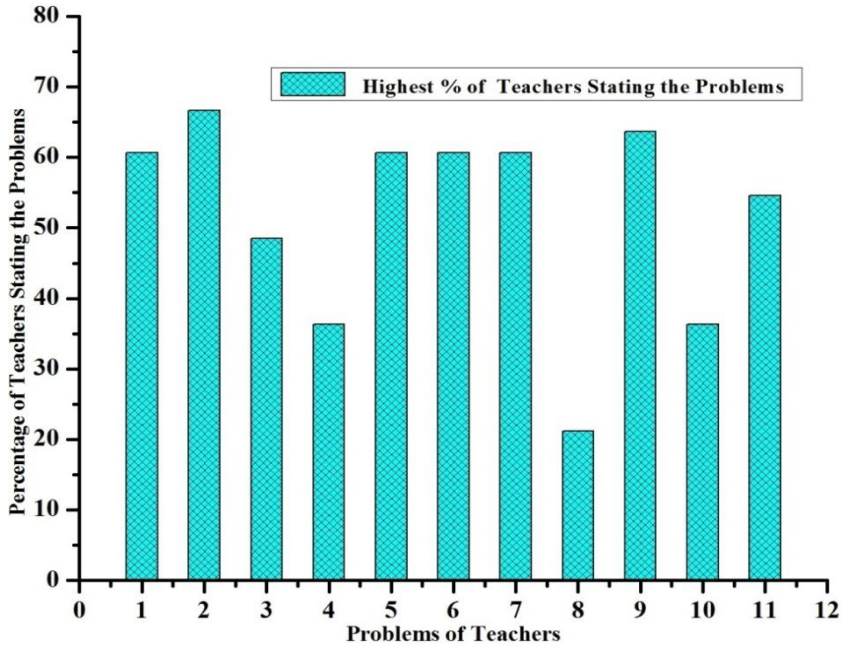

Figure 7: Problems most frequently stated by teachers

Table 4.5.12 and Figure 7 show the problems most frequently stated by teachers in different areas of problems.

Table 4.5.13: Overall top 10 problems stated by teachers

S.No.	Top 10 Problems of Teachers	%
1	Work load too heavy	66.67
2	Weakness of students in English	63.64
3	Irregular payment of salary	60.61
4	Equipment are not sufficient for all the students	60.61
5	Students wanting to change their subjects to other streams	60.61
6	Textbooks not available in the local market	60.61
7	Job opportunities are very limited in Mizoram as the state is backward in industry	54.55
8	Plus 2 level is not accepted/ qualified in many jobs	51.52
9	Irregular power supply	48.48
10	Congested classroom	45.45
11	The available equipment need frequent replacement	45.45
12	Qualities of the available equipment are not good	42.42
13	Textbooks need to be procured from outside Mizoram	42.42
14	Textbooks do not cover the whole syllabus	39.39
15	Classrooms too small for practical work	36.36
16	Practical works cannot be done due to irregular supply of electricity	36.36
17	The training centre is not well equipped	36.36

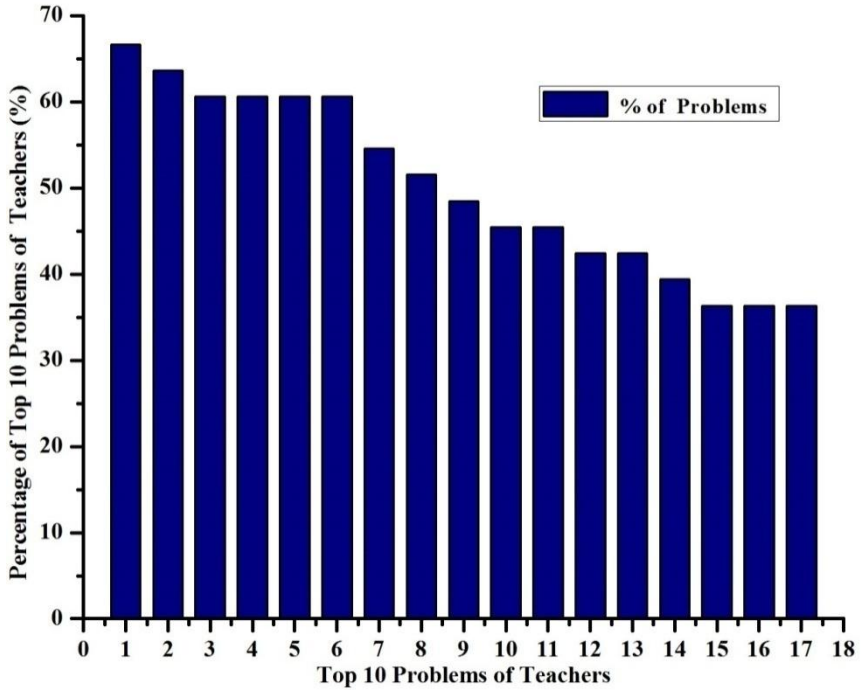

Figure 8: Overall top 10 problems stated by teachers

Table 4.5.13 and Figure 8 show the overall top 10 problems stated by teachers. The percentages of teachers stating these problems range from 36.36% and 66.67%.

4.6 Perception of Students about the Prospects of Vocational Education

The perceptions of students are presented for analysis and interpretation under the following heads:

- Perception of students about introducing new vocational courses in HSS
- Vocational courses which have better prospects for job placement in Mizoram
- Vocational courses which have better prospects for job placement outside Mizoram
- Vocational courses which have better prospects for self employment
- Offering more vocational courses in more school
- For which group of students vocational courses was best suitable for
- Ways in which vocational education can be improved
- About State Government in playing its role

Table 4.6.1: Students' perception about introducing some more vocational courses in higher secondary schools

Course Wise Distribution of Vocational Teachers									
Perception	**Computer Technique (249 Students)**	**Computer Software Application (22 Students)**	**Commercial Garment Design and Making (40 Students)**	**Automobile Engineering Technology (51 students)**	**Medical Laboratory Technician (114 Students)**	**Horticulture (85 Students)**	**Sericulture (29 Students)**	**Office Secretaryship (28 Students)**	**Total (618 Students)**
	No. & %	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**
Yes	215 (40.87)	16 (3.04)	36 (6.84)	40 (7.60)	93 (17.68)	73 (13.88)	25 (4.75)	28 (5.32)	526 (85.11)
If Yes, which courses?									
Dairying (Agriculture)	58 (39.46)	2 (1.36)	6 (4.08)	18 (12.24)	25 (17.01)	25 (17.01)	11 (7.48)	2 (1.36)	147 (23.79)
Vegetable Seed Production	52 (36.36)	1 (0.70)	10 (6.99)	16 (11.19)	23 (16.08)	23 (16.08)	12 (8.39)	6 (4.20)	143 (23.14)
Floriculture	26 (25.74)	2 (1.98)	6 (5.94)	12 (11.88)	10 (9.90)	33 (32.67)	8 (7.92)	4 (3.96)	101 (16.34)
Marketing & Salesmanship (Business & Commerce)	104 (50.24)	8 (3.86)	14 (6.76)	18 (8.70)	30 (14.49)	20 (9.66)	8 (3.86)	5 (2.42)	207 (33.50)
Steno-typist	36 (40.91)	2 (2.27)	4 (4.55)	9 (10.23)	10 (11.36)	1 (1.14)	4 (4.55)	22 (25)	88 (14.24)
Lineman (Engineering & Technology	101 (50.75)	11 (5.53)	7 (3.52)	23 (11.56)	21 (10.55)	16 (8.04)	9 (4.52)	11 (5.53)	199 (32.20)
Clock and Watch Technology	43 (52.44)	1 (1.22)	4 (4.88)	12 (11.56)	9 (10.98)	7 (8.54)	3 (3.66)	3 (3.66)	82 (13.27)
Hospital Documentation (Health & Paramedical)	108 (40.60)	9 (3.36)	17 (6.39)	17 (6.39)	68 (25.57)	24 (9.02)	11 (4.14)	14 (5.26)	268 (43.36)
Food Preserving & Processing (home science)	50 (37.04)	3 (2.22)	10 (7.41)	9 (6.67)	28 (20.74)	13 (9.63)	12 (8.89)	10 (7.41)	135 (21.84)
Bakery & Confectionery	57 (33.73)	2 (1.18)	22 (13.02)	16 (13.02)	29 (20.74)	30 (17.75)	10 (5.92)	3 (1.78)	169 (27.35)
Catering & Restaurant Management	65 (42.76)	3 (1.97)	17 (11.18)	15 (9.87)	25 (16.45)	16 (10.53)	8 (5.26)	3 (1.97)	152 (24.60)
Photography (Humanities and Others)	137 (48.24)	9 (3.17)	23 (8.10)	25 (8.80)	45 (15.85)	22 (7.75)	12 (4.23)	11 (3.87)	284 (45.95)
Health Care & Beauty Culture	77 (34.38)	4 (1.79)	22 (9.82)	16 (7.14)	51 (22.77)	34 (15.18)	8 (3.57)	12 (5.36)	224 (36.24)

The above table (Table 4.6.1) reveals that 85.11 per cent students of vocational subjects feel the need of introducing some more vocational courses in higher secondary schools.

There are different new courses that the respondents want the State Government to offer at higher secondary schools in Mizoram. Photography is the most frequently preferred course suggested by 45.95 per cent respondents followed by Hospital Documentation (Health and Para medical) suggested by 43.36 per cent and Health Care and Beauty which is suggested by 36.24 per cent of the respondents.

Among the students who perceive these courses to be best for newly introduction in higher secondary school, most of them are students of Computer Technique.

Other courses perceived to be good for introduction in higher secondary school in order of their importance are: Marketing & Salesmanship (Business & Commerce) recommended by 33.50 per cent, Lineman (Engineering & Technology) by 32.20 per cent, Bakery & Confectionary by 27.35 per cent.

Catering and Restaurant Management by 24.60 per cent, Dairying (Agriculture), Vegetable Seed Production by 23.14 per cent, and Food Preserving & Processing (Home science) by 21.84 per cent of respondents.

Clock and Watch Technology, Steno-typing, Floriculture are the least suggested courses for introduction in higher secondary school.

As a whole, the largest number of responses comes from students of Computer Technique.

Table 4.6.2: Students' perception about vocational course having better job placement in Mizoram

Perception	Course-Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	109 (66.06)	7 (4.24)	3 (1.82)	5 (3.03)	6 (3.64)	31 (18.79)	3 (1.82)	1 (0.61)	165 (26.70)
Computer Software Application	64 (65.31)	8 (8.16)	3 (3.06)	2 (2.04)	1 (1.02)	18 (18.37)	1 (1.02)	1 (1.02)	98 (15.86)
Commercial Garment Design and Making	8 (22.86)	0	19 (54.29)	1 (2.86)	1 (2.86)	3 (8.57)	3 (8.57)	0	35 (5.66)
Automobile Engi-neering Technology	11 (23.91)	1 (2.17)	2 (4.35)	26 (56.52)	2 (4.35)	1 (2.17)	3 (6.52)	0	46 (7.44)
Medical Laboratory Technician	13 (13.27)	0	1 (1.02)	12 (12.24)	71 (72.45)	0	1 (1.02)	0	98 (15.86)
Horticulture	5 (11.11)	0	1 (2.22)	1 (2.22)	1 (2.22)	34 (75.56)	3 (6.67)	0	45 (7.28)
Sericulture	3 (10)	0	4 (13.33)	1 (3.33)	3 (10)	3 (10)	16 (53.33)	0	30 (4.85)
Office Secretaryship	1 (16.67)	0	1 (16.67)	2 (33.33)	1 (16.67)	0	1 (16.67)	0	6 (0.97)

With respect to the prospects for better job placement in Mizoram, Table 4.6.2 shows that Computer Technique is the course that the highest percentage of the respondents *i.e*., 26.70 per cent think to have better prospects for job placement in Mizoram. Computer Software Application and Medical Laboratory Technician come in second place as 15.86 per cent respondents think that the subjects have a good job placement opportunity in Mizoram.

Automobile Engineering Technology, Horticulture, Commercial Garment Design and Making occupy the third, fourth and fifth place as 7.44 per cent, 7.28 per cent and 5.66 per cent respectively consider them as having better job placement opportunity in Mizoram. Sericulture and Office Secretaryship are the least chosen course as only 4.85 per cent and 0.97 per cent respectively perceive them as having prospects for job placement in the state.

Most students of all vocational courses except Computer Software Application and Office Secretaryship perceive their respective courses as having best prospect for job placement in Mizoram.

Table 4.6.3: Students' perception about vocational courses having better job placement outside Mizoram.

Perception	Course-Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	119 (62.63)	8 (4.21)	4 (2.11)	9 (4.74)	11 (5.79)	25 (13.16)	3 (1.58)	11 (5.79)	190 (30.74)
Computer Software Application	72 (58.54)	9 (7.32)	4 (3.25)	1 (0.81)	0	25 (20.33)	1 (0.81)	11 (8.94)	123 (19.90)
Commercial Garment Design and Making	16 (30.19)	0	24 (45.28)	1 (1.89)	4 (7.55)	4 (7.55)	4 (7.55)	0	53 (8.58)
Automobile Engineering Technology	18 (36)	0	1 (2)	26 (52)	3 (6)	1 (2)	1 (2)	0	50 (8.09)
Medical Laboratory Technician	7 (13.46)	0	1 (1.92)	3 (5.77)	37 (71.15)	3 (5.77)	1 (1.92)	0	52 (8.41)
Horticulture	1 (9.09)	0	1 (9.09)	1 (9.09)	0	7 (63.64)	1 (9.09)	0	11 (1.78)
Sericulture	4 (17.39)	0	1 (4.35)	1 (4.35)	0	4 (17.39)	13 (56.52)	0	23 (3.72)
Office Secretaryship	1 (25)	0	1 (25)	1 (25)	0	0	1 (25)	0	4 (0.65)

A look at Table 4.6.3 conveys that Computer Technique is the course perceived to be having best prospect for job placement outside Mizoram followed by Computer Software Application receiving choices from 19.90 per cent students.

Rest of the vocational courses receive few responses only ranging from 0.65 to 8.58 per cent which imply that they are not perceived to be having prospects for better job placement outside Mizoram.

Students of all the courses except Computer Software Application and Office Secretaryship perceive their respective courses to be having prospect for job placement outside the State.

Table 4.6.4: Students' perception about vocational courses which give better chance for self-employment

Perception	Course-Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	73 (80.22)	6 (6.59)	0	3 (3.30)	3 (3.30)	3 (3.30)	2 (2.20)	1 (1.10)	91 (14.72)
Computer Software Application	44 (72.13)	7 (11.48)	0	2 (3.28)	2 (3.28)	3 (4.92)	2 (3.28)	1 (1.64)	61 (9.87)
Commercial Garment Design and Making	10 (19.23)	0	26 (50)	3 (5.77)	2 (3.85)	6 (11.54)	4 (7.69)	1 (1.92)	52 (8.41)
Automobile Engineering Technology	23 (29.87)	1 (1.3)	0	32 (41.56)	6 (7.79)	3 (3.9)	3 (3.9)	9 (11.69)	77 (12.46)
Medical Laboratory Technician	6 (9.68)	0	0	2 (3.23)	51 (82.26)	0	2 (3.23)	1 (1.61)	62 (10.03)
Horticulture	5 (10)	0	0	1 (2)	2 (4)	36 (72)	5 (10)	1 (2)	50 (8.09)
Sericulture	4 (15.38)	0	0	1 (3.85)	1 (3.85)	2 (7.69)	17 (65.38)	1 (3.85)	26 (4.21)
Office Secretaryship	2 (28.57)	0	0	1 (14.29)	1 (14.29)	0	2 (28.57)	1 (14.29)	7 (1.13)

A perusal of the above table (Table 4.6.4) reveals that only a few students have perception about the courses which give better chance for self-employment. About 14.72 per cent respondents think Computer Technique has a best chance. 12.46 per cent respondents and 10.03 per cent perceive Automobile Engineering Technology and Medical Laboratory Technician as giving a better chance for self employment respectively. For 9.87 per cent, 8.41 per cent, and 8.09 per cent respondents, Computer Software Application, Commercial Garment Design and Making and Horticulture give the best chance for self-employment. A few per cent of 4.21 and 1.13 think that Sericulture and Office Secretaryship have a best chance for self employment.

Students of Computer Software Application and Office Secratryship do not perceive the courses they pursue as giving better chance for self-employment whereas students of all other vocational courses perceive so.

Students who perceive vocational courses offered in higher secondary school in Mizoram as giving good chance for self employment are very few. In other word majority of the students consider their courses as not having good chance for self employment.

Table 4.6.5: Students' perception about offering vocational courses in more school

Perception	Course-Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It is needed as more students can be enrolled to study vocational courses	110 (42.31)	9 (3.46)	18 (6.92)	27 (10.38)	42 (16.15)	24 (9.23)	13 (5)	17 (6.54)	260 (42.07)
It is needed as there will be more opportunities for students in different areas to study vocational courses	101 (41.39)	10 (4.10)	20 (8.20)	24 (9.84)	40 (16.39)	23 (9.43)	12 (4.92)	14 (5.74)	244 (39.48)
It is needed as vocational courses will become more popular among the people	128 (39.63)	9 (2.79)	22 (6.81)	27 (8.36)	47 (14.55)	56 (17.34)	15 (4.64)	19 (5.88)	323 (52.27)
It is needed to meet the priority need of the local area/ people	100 (36.10)	9 (3.25)	24 (8.66)	29 (10.83)	59 (21.30)	31 (11.19)	14 (5.05)	10 (3.65)	277 (25.09)

A careful study of the above table (Table 4.6.5) reveals the students' perception about offering more vocational courses in more schools. Majority of the students *i.e.*, 52.27 per cent think that offering vocational courses in more schools is needed to make the courses more popular among the people. A high percentage of Computer Technique students *i.e.*, 39.63 per cent and other course students ranging from 2.79 per cent to 17.34 per cent have this perception.

42.07 per cent respondents also think that offering vocational courses in more schools is needed as more students can be enrolled to study vocational courses. A high percentage of Computer Technique students (42.31%) and other course students ranging from 3.46 per cent to 16.15 per cent also perceive so.

Rest of the perceptions for the need of offering vocational courses in more schools are not relevant as majority of the students do not feel such needs.

Table 4.6.6: Students' perception on for which group of students vocational course is suitable

Perception	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
For poor performing students	44 (35.77)	6 (4.88)	7 (5.69)	10 (8.13)	24 (19.51)	16 (13.01)	10 (8.13)	6 (4.88)	123 (19.90)
For average performing students	125 (42.09)	7 (2.36)	14 (4.71)	22 (7.41)	65 (21.89)	32 (10.77)	15 (5.05)	17 (5.72)	297 (48.06)
For good performing students	43 (47.78)	2 (2.22)	2 (2.22)	10 (11.11)	12 (13.33)	13 (14.44)	4 (4.44)	4 (4.44)	90 (14.56)

The above table tells that 48.06 per cent respondents think that vocational course is best suitable for average performing students. Among those students, 42.09 per cent are students of Computer Technique and students of other courses comprise of 2.36 per cent to 21.89 per cent.

Out of all the respondents, 19.90 per cent students perceive vocational course as best suitable for poor performing students and 14.56 per cent as best suitable for good performing students. It is Computer Technique students who mostly hold these perceptions.

Table 4.6.7: Students' perceptions about the ways vocational education can be improved

Perception	Course-Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
By providing more infrastructural facilities	159 (43.32)	11 (3)	29 (7.90)	36 (9.81)	76 (20.71)	30 (8.17)	16 (4.36)	10 (2.72)	367 (59.39)
By reducing the size of the class	16 (50)	0	5 (16.67)	5 (13.33)	2 (6.67)	2 (6.67)	0	0	30 (4.85)
By increasing the size of the class	18 (43.90)	0	2 (4.88)	5 (12.20)	3 (7.32)	4 (9.76)	2 (4.88)	7 (17.07)	41 (6.63)
By having more practical works	158 (40.83)	11 (2.84	25 (6.46)	38 (9.82)	75 (19.38)	54 (13.95)	15 (3.88)	11 (2.84)	387 (62.62)
By revising the syllabus	60 (48.78)	4 (3.25)	5 (4.07)	9 (7.32)	18 (14.63)	15 (12.20)	7 (5.69)	5 (4.07)	123 (19.9)
By introducing more courses	14 (42.42)	2 (6.06)	2 (6.06)	2 (6.06)	4 (12.12)	8 (24.24)	0	1 (3.03)	33 (5.34)
By improving the service conditions of vocational teachers	85 (36.64)	9 (3.88)	12 (5.17)	18 (7.76)	39 (16.81)	32 (13.79)	13 (5.60)	24 (10.34)	232 (37.54)
By having more experienced teachers	99 (37.36)	7 (2.64)	16 (6.04)	22 (8.30)	51 (19.25)	35 (13.21)	12 (4.53)	23 (8.68)	265 (42.88)
By enhancing the professional skills of vocational teachers through training programs	86 (40.38)	7 (3.29)	16 (7.51)	15 (7.04)	30 (14.08)	24 (11.27)	12 (5.63)	23 (10.80)	213 (34.47)
By improving on the job training	65 (36.31)	7 (3.91)	11 (6.15)	15 (8.38)	23 (12.85)	21 (11.73)	13 (7.26)	24 (13.41)	179 (28.96)

On the ways of improving vocational education Table 4.6.7 indicates that having more practical works and providing more infrastructural facilities are the two most important ways as majority of students (62.62% and 59.39%) perceive so.

Next important ways are: i) having more experienced teachers (as perceived by 42.88%); ii) improving the service conditions of vocational teachers (by 37.54%); iii) enhancing the professional skills of vocational teachers through training programs (by 34.47%) and iv) improving on the job training (by 28.96%).

Rest of the means mentioned by few students ranging from 4.85 per cent to 19.9 per cent are: i) revising the syllabus (by 19.9%); ii) increasing the size of the class (by 6.63%); introducing more vocational courses (5.34%) and reducing the size of the class (4.85%).

It is worth mentioning that Computer Technique course again contributes the largest share of respondents for all the responses.

Table 4.6.8: Students' perception about the State Government in playing its role in relation to vocational education at Higher secondary school level in Mizoram

Perception	Course-Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It has done what it is supposed to do	28 (41.79)	7 (10.45)	5 (7.46)	5 (7.46)	16 (23.88)	3 (4.48)	3 (4.48)	0	67 (10.48)
It should give more importance to vocational education	114 (38.51)	6 (2.03)	17 (5.74)	32 (10.81)	33 (11.15)	61 (20.61)	7 (2.36)	26 (8.78)	296 (47.90)
It should provide more funds for vocational courses	127 (38.84)	4 (1.22)	25 (7.65)	30 (9.17)	63 (19.27)	44 (13.46)	13 (3.98)	21 (6.42)	327 (52.91)
It should offer more courses in more schools	134 (42.95)	10 (3.21)	22 (7.05)	31 (9.94)	46 (14.74)	34 (10.90)	12 (3.85)	23 (7.37)	312 (50.48)
It should give more grants for the maintenance of the existing vocational courses	127 (36.39)	8 (2.29)	25 (7.16)	31 (8.88)	64 (18.34)	52 (14.90)	20 (5.73)	22 (6.30)	349 (56.47)

By looking at Table 4.6.8 we can infer that majority of the students perceive the State Government as not having done what it is supposed to do with regard to vocational education in Mizoram. Students perception on what the State Government should do in this regard are:

1) It should give more grants for the maintenance of the existing vocational courses (perceived by 56.47%)

2) It should provide more funds for vocational courses (perceived by 52.91%)
3) It should offer more courses in more schools (perceived by 50.48%)
4) It should give more importance to vocational education (perceived by 47.90%)

It is again the course of Computer Technique that has the largest number of students who perceive so, whereas Computer Software Application contributes the least number of students perceiving the same.

Table 4.6.9: Students' perception about the SCERT in playing its role in relation to vocational education at higher secondary school level in Mizoram

Perception	Course Wise Distribution of Students								
	Computer Technique (249 Students)	Computer Software Application (22 Students)	Commercial Garment Design and Making (40 Students)	Automobile Engineering Technology (51 students)	Medical Laboratory Technician (114 Students)	Horticulture (85 Students)	Sericulture (29 Students)	Office Secretaryship (28 Students)	Total (618 Students)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It has done what it is supposed to do	42 (43.30)	5 (5.15)	8 (8.25)	11 (11.34)	20 (20.62)	4 (4.12)	7 (7.22)	0	97 (15.70)
It should visit schools to have career awareness more often	139 (37.17)	11 (2.94)	24 (6.42)	27 (7.22)	75 (20.05)	57 (15.24)	13 (3.48)	28 (7.49)	374 (60.52)
It should organize training for vocational teachers more regularly	119 (40.75)	7 (2.40)	15 (5.14)	23 (7.88)	50 (17.12)	42 (14.38)	13 (4.45)	23 (7.88)	292 (47.25)

Analyzing the above table, it is observable that 60.52 per cent of students perceived that SCERT should visit schools to have career awareness more often. 47.25 per cent of the respondents perceived that SCERT should organize training for vocational teachers more regularly and 15.70 per cent of the students think that SCERT has done what it is supposed to do.

It is Computer Technique that has the largest number of respondents and Medical Laboratory Technician is the second largest contributors.

Table 4.6.10: Most frequently stated perceptions of students

S.No.	Perception of Students about the Prospects of Vocational Education	Most Frequently Stated Perceptions of Students	%
1	Students' perception about introducing some more vocational courses in higher secondary schools	Photography (Humanities and Others)	45.95
2	Students' perception about vocational course having better job placement in Mizoram	Computer Technique	26.70
3	Students' perception about vocational courses having better job placement outside Mizoram	Computer Technique	30.74
4	Students' perception about vocational courses which give better chance for self-employment	Computer Technique	14.72
5	Students' perception about offering vocational courses in more school	It is needed as vocational courses will become more popular among the people	52.27
6	Students' perception about for which group of students to find a suitable vocational course	For average performing students	48.06
7	Students' perceptions about the ways vocational education can be improved	By having more practical works	62.62
8	Students' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should give more grants for the maintenance of the existing vocational courses	56.47
9	Students' perception about the SCERT in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should organize training for vocational teachers more regularly	60.52

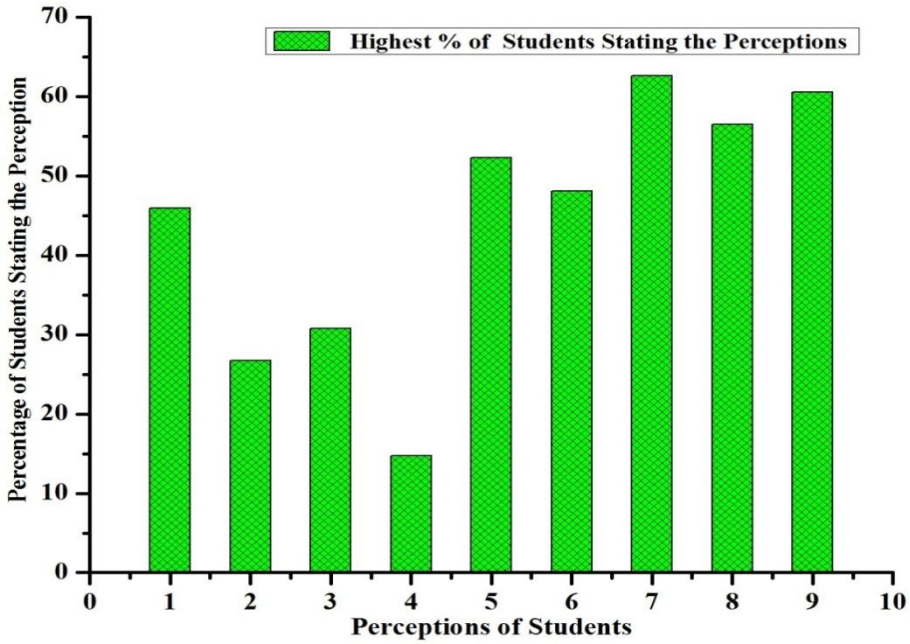

Figure 9: Most frequently stated perceptions of students

Table 4.6.10 and Figure 9 reveal the most frequently stated perception of students about the prospects of vocational education.

Table 4.6.11: Overall top 10 perceptions of students

S.No.	Perceptions of Students	Top 10 Perceptions of Students	%
1	Students' Perceptions about the ways vocational education can be improved	By having more practical works	62.62
2	Students' perception about the SCERT in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should visit schools to have career awareness more often	60.52
3	Students' perceptions about the ways vocational education can be improved	By providing more infrastructural facilities	59.39
4	Students' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should give more grants for the maintenance of the existing vocational courses	56.47
5	Students' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should provide more funds for vocational courses	52.91
6	Students' perception about offering vocational courses in more school	It is needed as vocational courses will become more popular among the people	52.27
7	Students' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should offer more courses in more schools	50.48
8	Students' perception on for which group of students vocational course is suitable	For average performing students	48.06
9	Students' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should give more importance to vocational education	47.9
10	Students' perception about the SCERT in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should organize training for vocational teachers more regularly	47.25

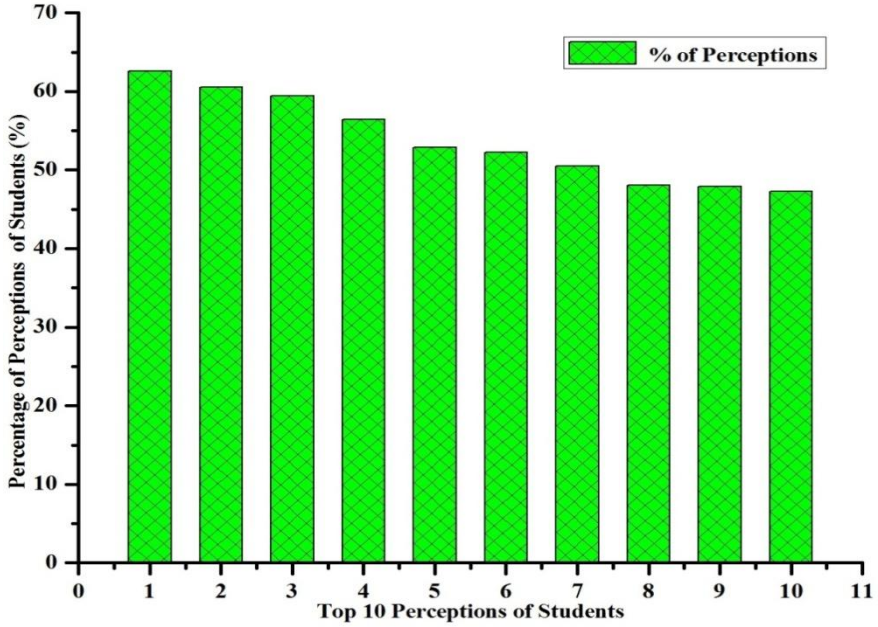

Figure 10: Overall top 10 perceptions of students

Table 4.6.11 and figure 10 tell the overall top 10 perceptions of students about the prospects of vocational education. The percentage of students stating these perception ranges from 47.25% and 62.62%.

4.7 Perception of Teachers about the Prospects of Educational Education

The perceptions of teachers about the prospects of vocational education are presented for analysis and interpretation under the following heads:

- Perception of teachers about introducing new vocational courses in HSS
- Vocational courses which have better prospects for job placement in Mizoram
- Vocational courses which have better prospects for job placement outside Mizoram
- Vocational courses which have better prospects for self employment
- Offering more vocational courses in more school
- For which group of students vocational courses was best suitable for
- Teachers training
- System of evaluation to assess the ability of the students
- Does On-the-job training helps in finding job
- Ways in which vocational education can be improved
- About State Government in playing its role

Table 4.7.1: Teachers' perception on whether the state need to introduce more vocational courses in Mizoram

Perception	Course Wise Distribution of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Dairying (Agriculture)	2 (28.57)	1 (14.29)	0	0	0	3 (42.86)	1 (14.29)	0	7 (21.21)
Vegetable Seed Production	2 (40)	0	0	1 (20)	0	2 (40)	0	0	5 (15.15)
Floriculture	2 (33.33)	0	0	1 (16.67)	0	2 (33.33)	1 (16.67)	0	6 (18.18)
Marketing & Salesman-ship (Business & Commerce)	4 (36.36)	0	2 (18.18)	1 (9.09)	1 (9.09)	1 (9.09)	1 (9.09)	1 (9.09)	11 (33.33)
Steno-typing	2 (20)	3 (30)	0	1 (10)	0	0	1 (10)	3 (30)	10 (30.30)
Lineman (Engineering & Technology	4 (36.36)	2 (18.18)	0	1 (9.09)	1 (9.09)	0	1 (9.09)	2 (18.18)	11 (33.33)
Clock and watch techno-logy	2 (40)	1 (20)	0	1 (20)	0	0	0	1 (20)	5 (15.15)
Hospital Docu-mentation (Health & Paramedical)	4 (36.36)	1 (9.09)	0	1 (9.09)	1 (9.09)	2 (18.18)	0	2 (18.18)	11 (33.33)
Food presser-ving & process-sing (home science)	4 (28.57)	1 (7.14)	1 (7.14)	1 (7.14)	1 (7.14)	3 (21.43)	2 (14.29)	1 (7.14)	14 (42.42)
Bakery & Con-fectionery	6 (50)	2 (16.67)	0	2 (16.67)	1 (8.33)	0	1 (8.33)	0	12 (36.36)
Catering & Restaurant Management	4 (30.77)	2 (15.38)	1 (7.69)	2 (15.38)	0	1 (7.69)	1 (7.69)	2 (15.38)	13 (39.39)
Photography (Humanities and Others)	4 (36.36)	2 (18.18)	0	2 (18.18)	2 (18.18)	0	0	1 (9.09)	11 (33.33)
Health care & Beauty culture	6 (40)	2 (13.33)	2 (13.33)	1 (6.67)	0	1 (6.67)	1 (6.67)	2 (13.33)	15 (45.45)

Table 4.7.1 reveals teachers' perception about introducing some more vocational courses in higher secondary school. In addition to the available course existing in Mizoram, Health Care & Beauty Culture and Food Preserving & Processing (home science) are the courses that 45.45 per cent and 42.42 per cent respondents perceive as necessary for newly introduction.

Catering & Restaurant Management and Bakery & Confectionery are the courses suggested to be introduced by a high per cent of respondents *i.e.*, 39.39 per cent and 36.36 per cent respectively. Marketing & Salesmanship (Business & Commerce), Lineman (Engineering & Technology), Hospital Documentation (Health & Paramedical), and Photography (Humanities and others) are suggested by 33.33 per cent respondents each. Steno-typing is also chosen by 30.30 per cent respondents for introduction in Mizoram.

Other courses like Dairying (Agriculture) and Floriculture are perceived to be introduction by 21.21 per cent and 18.18 per cent respondents respectively and, Vegetable Seed Production and Clock & Watch Technology by 15.15 per cent each.

Majority of the teachers who perceive the need of introducing these new courses are Computer Technique teachers except Dairying and Steno Typing.

Table 4.7.2: Teachers' perception on whether they find the need of introducing some more vocational courses in their school

Do you find the need for introducing some more Vocational Courses in your School?									
Perception	**Computer Technique (10 Teachers)**	**Computer Software Application (4 Teachers)**	**Commercial Garment Design and Making (2 Teachers)**	**Automobile Engineering Technology (2 Teachers)**	**Medical Laboratory Technician (3 Teachers)**	**Horticulture (3 Teachers)**	**Sericulture (6 Teachers)**	**Office Secretaryship (3 Teachers)**	**Total (33 Teachers)**
	No. & %	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	
Yes	3 (25)	0	0	1 (8.33)	2 (16.67)	1 (8.33)	2 (16.67)	3 (25)	12 (36.36)
If Yes, which courses?									
Computer Technique	0	0	0	0	0	0	1 (50)	1 (50)	2 (6.06)
Computer Software Application	0	0	0	0	0	0	1 (100)	0	1 (3.03)
Commercial Garment & Designing	1 (20)	0	0	1 (20)	0	0	1 (20)	2 (40)	5 (15.15)
Automobile Engi-neering Technology	1 (100)	0	0	0	0	0	0	0	1 (3.03)
Photography	0	0	0	0	1 (100)	0	0	0	1 (3.03)
Food Preserving & Processing	0	0	0	0	0	1 (100)	0	0	1 (3.03)
Health care and beauty culture	0	0	0	0	0	0	0	1 (100)	1 (3.03)

The above table (Table 4.7.2) shows that a fewer per cent *i.e.*, 36.36 per cent of vocational teachers feel the need of opening more courses in their schools.

Implication of data in the table is that majority of the teachers do not perceive the need of introducing some more vocational courses in the schools.

Table 4.7.3: Teachers' perception about vocational courses which have prospects for better job placement in Mizoram

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	3 (60)	1 (20)	0	0	0	0	1 (20)	0	5 (15.15)
Computer Software Application	1 (100)	0	0	0	0	0	0	0	1 (3.03)
Commercial Garment Design and Making	2 (50)	1 (25)	0	1 (25)	0	0	0	0	4 (12.12)
Automobile Engineering Technology	3 (60)	0	1 (20)	1 (20)	0	0	0	0	5 (15.15)
Medical Laboratory Technician	5 (62.5)	0	0	0	2 (25)	0	1 (12.5)	0	8 (24.24)
Horticulture	1 (100)	0	0	0	0	0	0	0	1 (3.03)
Sericulture	1 (33.33)	0	0	1 (33.33)	0	0	1 (33.33)	0	3 (9.09)
Office Secretaryship	1 (20)	0	0	1 (20)	0	0	0	3 (60)	5 (15.15)

Regarding the course that has better prospect for employment in Mizoram, Table 4.7.3 indicates that Medical Laboratory Technician is perceived by 24.24 per cent respondents to be the best. Computer Technique, Automobile Engineering Technology and Office Secretaryship occupy the second place as each 15.15 per cent respondents perceived them as having good job placement in Mizoram. Other courses that the small percentages of teachers perceive as having prospect for job placement in Mizoram are Commercial Garment Design and Making, Sericulture, Computer Software Application and Horticulture.

Teachers of Computer Technique are the ones who mostly hold that kind of perception.

The above table reveals that majority of vocational teachers perceive existing vocational courses as not having good prospects for better job placement in Mizoram.

Table 4.7.4: Teachers' perception about vocational courses which have prospects for better job placement outside Mizoram

Perception	Course-Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	5 (45.45)	2 (18.18)	0	1 (9.09)	1 (9.09)	0	2 (18.18)	0	11 (33.33)
Computer Software Application	1 (50)	1 (50)	0	0	0	0	0	0	2 (6.06)
Commercial Garment design and making	2 (50)	0	1 (25)	0	0	0	1 (25)	0	4 (12.12)
Automobile engineering Technology	1 (33.33)	0	0	2 (66.67)	0	0	0	0	3 (9.09)
Medical Laboratory Technician	1 (100)	0	0	0	0	0	0	0	1 (3.03)
Horticulture	1 (100)	0	0	0	0	0	0	0	1 (3.03)
Sericulture	1 (100)	0	0	0	0	0	0	0	1 (3.03)
Office Secretary ship	1 (100)	0	0	0	0	0	0	0	1 (3.03)

In relation to the courses having prospects for better job placement outside Mizoram, the largest percentage of respondents *i.e.*, 33.33 per cent perceive that Computer Technique has the best prospect followed by Commercial Garment Design and Making as perceived by 12.12 per cent respondents. Computer Software Application has the best chance for 6.06 per cent. For 9.09 per cent respondents Automobile Engineering Technology has the best chance and for each 3.03 per cent Medical Laboratory Technician, Horticulture, Sericulture and Office Secretaryship has the best chance for employment outside Mizoram.

As the percentages of teachers perceiving the existing vocational courses as having prospects for better job placement outside Mizoram are all very small, it can be interpreted that vocational courses offered at higher secondary level in Mizoram do not have prospect for job placement outside Mizoram.

Table 4.7.5: Teachers' perception about vocational courses which give better chance for self-employment

Perception	Course-Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	2 (33.33)	2 (33.33)	0	0	0	0	2 (33.33)	0	6 (18.18)
Computer Software Application	1 (50)	0	0	0	0	0	1 (50)	0	2 (6.06)
Commercial Garment Design and Making	3 (33.33)	1 (11.11)	2 (22.22)	1 (11.11)	0	0	2 (22.22)	0	9 (27.27)
Automobile Engineering Technology	4 (50)	0	0	1 (12.5)	1 (12.5)	0	1 (12.5)	1 (12.5)	8 (24.24)
Medical Laboratory Technician	2 (66.67)	0	0	0	0	0	1 (50)	0	3 (9.09)
Horticulture	1 (25)	0	0	0	0	1 (25)	2 (50)	0	4 (12.12)
Sericulture	2 (40)	0	0	0	0	0	3 (60)	0	5 (15.15)
Office Secretaryship	1 (50)	0	0	0	0	0	1 (50)	0	2 (6.06)

Analysis of the above table (Table 4.7.5) reveals that Commercial Garment Design and Making gives a best chance for self employment based on perception of 27.27 per cent respondents. Automobile Engineering Technology comes in second place in the perception of teachers as giving a good chance for self employment.

Computer Technique, Sericulture, Horticulture and Medical Laboratory Technician occupy the third, fourth, fifth and sixth place as 18.18 per cent, 15.15 per cent, 12.12 per cent, and 9.09 per cent respondents respectively mention them. For 6.06 per cent each, Computer Software Application and Office Secretaryship give a better chance for self employment.

Majority of the respondents having such kind of perceptions are mainly from courses of Computer Technique and Sericulture.

Table 4.7.6: Teachers' perception about offering vocational courses in more schools

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It is needed as more students can be enrolled to study vocational courses	4 (40)	0	0	0	1 (10)	1 (10)	2 (20)	2 (20)	10 (30.30)
It is needed as there will be more opportunities for students in different areas to study vocational courses	5 (38.46)	1 (7.69)	0	0	0	1 (7.69)	3 (23.08)	3 (23.08)	13 (39.39)
It is needed as vocational courses will become more popular among the people	6 (33.33)	2 (11.11)	2 (11.11)	0	1 (5.56)	1 (5.56)	3 (16.67)	3 (16.67)	18 (54.55)
It is needed to meet the priority need of the local area/ people	5 (35.71)	1 (7.14)	0	0	1 (7.14)	2 (14.29)	3 (21.43)	2 (14.29)	14 (42.42)

Table 4.7.6 depicts that offering vocational courses in more schools is needed mainly to popularise the courses among people as this perception is held by 54.55 per cent of the teachers. Other needs for offering vocational courses in more schools are:

1) To meet the priority need of the local area/ people as perceived by 42.42 per cent of the teachers
2) To give opportunities for students in different areas to study vocational courses as perceived by 39.39 per cent.

3) To enroll more students in vocational courses as perceived by 30.30 per cent of the teachers.

Teachers of Computer Technique constitute the largest percentage for each response whereas teachers of Automobile Engineering Technology do not give such responses meaning that they perceive offering vocational courses in more schools as not needed.

Table 4.7.7: Teachers' perception about in what ways vocational courses can be improved

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
By providing more infrastructural facilities	8 (36.36)	1 (4.55)	1 (4.55)	2 (9.09)	1 (4.55)	3 (13.64)	3 (13.64)	3 (13.64)	22 (66.67)
By reducing the size of the class	0	0	0	0	1 (100)	0	0	0	1 (3.03)
By increasing the size of the class	1 (16.67)	0	1 (16.67)	0	0	0	1 (16.67)	3 (50)	6 (18.18)
By having more practical work	6 (42.86)	0	1 (7.14)	2 (14.29)	1 (7.14)	2 (14.29)	2 (14.29)	0	14 (42.42)
By updating and improving the curriculum	5 (29.41)	3 (17.65)	2 (11.76)	1 (5.88)	2 (11.76)	1 (5.88)	2 (11.76)	1 (5.88)	17 (51.51)
By introducing more courses	4 (40)	0	0	0	0	1 (10)	2 (20)	3 (30)	10 (30.30)
By improving the service conditions of vocational teachers	7 (30.43)	3 (13.04)	2 (8.7)	2 (8.7)	2 (8.7)	1 (4.35)	3 (13.04)	3 (13.04)	23 (69.70)
By improving on the job training	5 (29.41)	1 (5.88)	2 (11.76)	1 (5.88)	0	2 (11.76)	3 (17.65)	3 (17.65)	17 (51.51)
By enhancing the professional skills of vocational teacher through training programs	4 (28.57)	1 (7.14)	1 (7.14)	1 (7.14)	1 (7.14)	1 (7.14)	3 (21.43)	2 (14.29)	14 (42.42)

As per Table 4.7.7, ways in which vocational courses introduced in Mizoram can be improved as perceived by majority of the teachers are:

1) By improving the service conditions of vocational teachers perceived by 69.70 per cent teachers.
2) By providing more infrastructural facilities perceived by 66.67 per cent teachers
3) By updating and improving the curriculum perceived by 51.51 per cent teachers, and
4) By improving on the job training perceived by 51.51 per cent teachers.

Rest of the ways/means perceived to be effective for improvement of vocational courses by teachers ranging from 3.03 to 42.42 per cent are:

1) By enhancing the professional skills of vocational teacher through training programs by 42.42 per cent teachers
2) By having more practical work by 42.42 per cent teachers
3) By introducing more courses by 30.30 per cent teachers
4) By increasing the size of the class by 18.18 per cent teachers
5) By reducing the size of the class by 3.03 per cent teachers.

For all the ways or means of improving vocational courses suggested, majority of the responses come from teachers of Computer Technique.

Table 4.7.8: Teachers' perception on for which group of students vocational course is suitable

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
For poor performing students	2 (40)	0	0	1 (20)	1 (20)	1 (20)	0	0	5 (15.15)
For average performing students	7 (29.17)	1 (4.17)	2 (8.33)	2 (8.33)	2 (8.33)	3 (12.5)	4 (16.67)	3 (12.5)	24 (72.73)
For good performing students	5 (33.33)	4 (26.67)	2 (13.33)	0	1 (6.67)	0	2 (13.33)	1 (6.67)	15 (45.45)

As shown in Table 4.7.8, majority of the teachers (72.73%) perceive vocational course as suitable for average performing students whereas only 15.15 per cent of teachers perceive it as suitable for poor performing students. There are 45.45 per cent teachers who hold the view that the course is suitable for good performing students.

Teachers from all vocational courses hold the perception that vocational course is most suited to average performing students and teachers of Computer Technique constitute the highest percentage. As a whole, Computer Technique teachers are the ones who give the highest percentages of responses.

Table 4.7.9: Teachers perception on attending more training

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	8 (26.67)	4 (13.33)	2 (6.67)	2 (6.67)	3 (10)	3 (10)	6 (20)	2 (6.67)	30 (90.91)
No	2 (66.67)	0	0	0	0	0	0	1 (33.33)	3 (9.09)

Data in Table 4.7.9 clearly reveals that teachers of vocational courses perceive training as very important for improvement of teaching as responses of as many as 90.91 per cent teachers say so. The only teachers who consider training as not important for improvement of teaching are from Computer Technique and Office Secretaryship.

Table 4.7.10: Teachers' perception on the present system of evaluation suitable to assess the ability of the students

Course Wise Distributions of Teachers									
Perception	**Computer Technique (10 Teachers)**	**Computer Software Application (4 Teachers)**	**Commercial Garment Design and Making (2 Teachers)**	**Automobile Engineering Technology (2 Teachers)**	**Medical Laboratory Technician (3 Teachers)**	**Horticulture (3 Teachers)**	**Sericulture (6 Teachers)**	**Office Secretaryship (3 Teachers)**	**Total (33 Teachers)**
	No. & %	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**
Yes	5 (26.32)	3 (15.79)	2 (10.53)	0	1 (5.26)	1 (5.26)	4 (21.05)	3 (15.79)	19 (57.58)
No	5 (35.71)	1 (7.14)	0	2 (14.29)	2 (14.29)	2 (14.29)	2 (14.29)	0	14 (42.42)

From Table 4.7.10, we find that 57.58 per cent teachers of vocational courses find the present system of evaluation as suitable for assessing the ability of the students while the rest of 42.42 per cent teachers do not find so.

For both the responses, teachers of Computer Technique constitute the highest percentages. No teacher of Automobile Engineering Technology perceives the evaluation system as suitable whereas no teachers of Commercial Garment Design and Making and Office Secretaryship consider the system as not suitable.

Table 4.7.11: Teachers' perception about on-the-job training in finding job

Course Wise Distributions of Teachers									
Perception	**Computer Technique (10 Teachers)**	**Computer Software Application (4 Teachers)**	**Commercial Garment Design and Making (2 Teachers)**	**Automobile Engineering Technology (2 Teachers)**	**Medical Laboratory Technician (3 Teachers)**	**Horticulture (3 Teachers)**	**Sericulture (6 Teachers)**	**Office Secretaryship (3 Teachers)**	**Total (33 Teachers)**
	No. & %	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**
Yes	7 (33.33)	2 (9.52)	0	2 (9.52)	2 (9.52)	2 (9.52)	4 (19.05)	2 (9.52)	21 (63.64)
No	3 (25)	2 (16.67)	2 (16.67)	0	1 (8.33)	1 (8.33)	2 (16.67)	1 (8.33)	12 (36.36)

Table 4.7.11 shows that majority of teachers (63.64%) perceive on the job training as helping students in finding job while rest of the teachers do not perceive so.

It is teachers of Computer Technique who give most importance to on-the-job training to find job. While this is so, teachers of Commercial Garment Design and Making do not at all perceive the same.

Table 4.7.12: Teachers' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It has done what it is supposed to do	0	0	0	0	0	0	0	0	0
It should give more importance to vocational education	10 (35.71)	4 (14.29)	2 (7.14)	1 (3.57)	3 (10.71)	3 (10.71)	3 (10.71)	2 (7.14)	28 (84.85)
It should provide more funds for vocational courses	9 (34.62)	3 (11.54)	2 (7.69)	1 (3.85)	1 (3.85)	3 (11.54)	5 (19.23)	2 (7.69)	26 (78.79)
It should offer more courses in more schools	3 (30)	1 (10)	1 (10)	0	0	1 (10)	2 (20)	2 (20)	10 (30.30)
It should give more grants for the maintenance of the existing vocational courses	5 (50)	1 (10)	0	0	1 (10)	1 (10)	2 (20)	0	10 (30.30)

As seen in Table 4.7.12, no vocational course teacher perceives Government of Mizoram as having done what it is supposed to do. As many as 84.85 per cent teachers feel that the Government should give more importance to vocational education and 78.79 per cent want the Government to provide more funds for the courses.

A small percentage of teachers (30.30%) also think that the Government should offer more courses in more schools and give more grants for the maintenance of the existing vocational courses.

The highest percentage of response for each category comes from teachers of Computer Technique whereas the lowest percentage of response is from teachers of Automobile Engineering Technology.

Table 4.7.13: Teachers' perception about SCERT in playing its role in relation to vocational education at higher secondary school stage in Mizoram

Perception	Course Wise Distributions of Teachers								
	Computer Technique (10 Teachers)	Computer Software Application (4 Teachers)	Commercial Garment Design and Making (2 Teachers)	Automobile Engineering Technology (2 Teachers)	Medical Laboratory Technician (3 Teachers)	Horticulture (3 Teachers)	Sericulture (6 Teachers)	Office Secretaryship (3 Teachers)	Total (33 Teachers)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It has done what it is supposed to do	0	0	0	0	0	0	0	2 (100)	2 (6.06)
It has not done what it is supposed to do	3 (25)	1 (8.33)	2 (16.67)	1 (8.33)	1 (8.33)	0	4 (33.33)	0	12 (36.36)
It should visit schools to have career awareness more often	6 (31.58)	4 (21.05)	1 (5.26)	1 (5.26)	2 (10.53)	2 (10.53)	3 (15.79)	0	20 (60.61)
It should organize training for vocational teachers more regularly	6 (31.58)	3 (15.79)	2 (10.53)	1 (5.26)	1 (5.26)	2 (10.53)	4 (21.05)	0	19 (57.57)

Table 4.7.13 portrays that the only teachers who perceive SCERT as having done what it is required to do are teachers of Office Secretaryship while all other teachers do not perceive so.

On the perception about what SCERT should do, 60.61 per cent teachers think that it should visit schools to have career awareness more often and 57.57 per cent teachers want it to organize training for vocational teachers more frequently. Among the teachers who hold this view, the largest percentage is comprised of Computer Technique teachers.

Table 4.7.14: Most frequently stated perceptions of teachers

S.No.	Perception of Teachers about the Prospects of Educational Education	Most Frequently Stated Perceptions of Teachers	%
1	Teachers' perception whether the State need introduce more Vocational Courses in Mizoram	Health care & Beauty culture	45.45
2	Teachers' perception whether they find the need of introducing some more vocational courses in their school	Commercial Garment & Designing	15.15
3	Teachers' perception about vocational courses which have prospects for better job placement in Mizoram	Medical Laboratory Technician	24.24
4	Teachers' perception about vocational courses which have prospects for better job placement outside Mizoram	Computer Technique	33.33
5	Teachers' perception about vocational courses which give better chance for self-employment	Commercial Garment Design and Making	27.27
6	Teachers' perception about offering Vocational Courses in more schools	It is needed as vocational courses will become more popular among the people	54.55
7	Teachers' perception about what way vocational education can be improved	By providing more infrastructural facilities	69.7
8	Teachers' perception on for which group of students vocational course is suitable	For average performing students	72.73
9	Teachers perception on attending more training	Yes	90.91
10	Teachers' perception on the present system of evaluation suitable to assess the ability of the students	Yes	57.58
11	Teachers' perception about on-the-job training in finding job	Yes	63.64
12	Teachers' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram.	It should give more importance to vocational education	84.85
13	Teachers' perception about SCERT in playing its role in relation to vocational education at Higher Secondary School Stage in Mizoram	It should visit schools to have career awareness more often	60.61

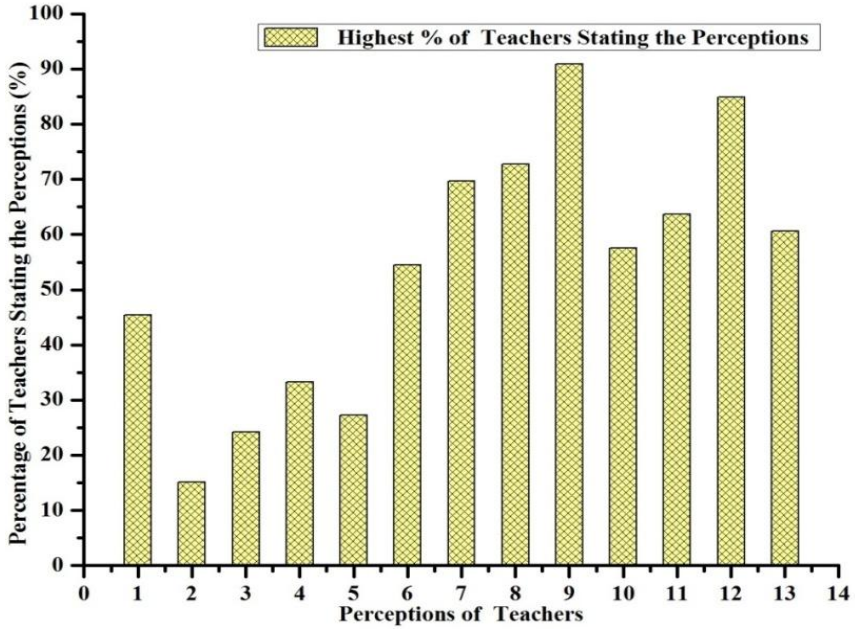

Figure 11: Most frequently stated perceptions of teachers

Table 4.7.14 and Figure 11 show the perception most frequently stated by teachers about the prospects of vocational education.

Table 4.7.15: Overall top 10 perceptions of teachers

S.No.	Perceptions of Teachers	Top 10 Perceptions of Teachers	%
1	Teachers Perception on attending more training	Yes	90.91
2	Teachers' Perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram	It should give more importance to vocational education	84.85
3	Teachers' Perception about the State Government in playing its role in relation to vocational education at Higher secondary school level in Mizoram	It should provide more funds for vocational courses	78.79
4	Teachers' Perception on for which group of students Vocational Course is suitable	For average performing students	72.73
5	Teachers' Perception about what way Vocational Education can be Improved	By improving the service conditions of vocational teachers	69.7
6	Teachers' Perception about what way Vocational Education can be Improved	By providing more infrastructural facilities	66.67
7	Teachers' Perception about on-the-job training in finding job	Yes	63.64
8	Teachers' Perception about SCERT in playing its role in relation to vocational education at higher secondary school Stage in Mizoram	It should visit schools to have career awareness more often	60.61
9	Teachers' Perception on the present system of evaluation suitable to assess the ability of the students	Yes	57.58
10	Teachers' Perception about SCERT in playing its role in relation to vocational education at higher secondary school Stage in Mizoram	It should organize training for vocational teachers more regularly	57.58
11	Teachers' Perception about offering Vocational Courses in More Schools	It is needed as vocational courses will become more popular among the people	54.55

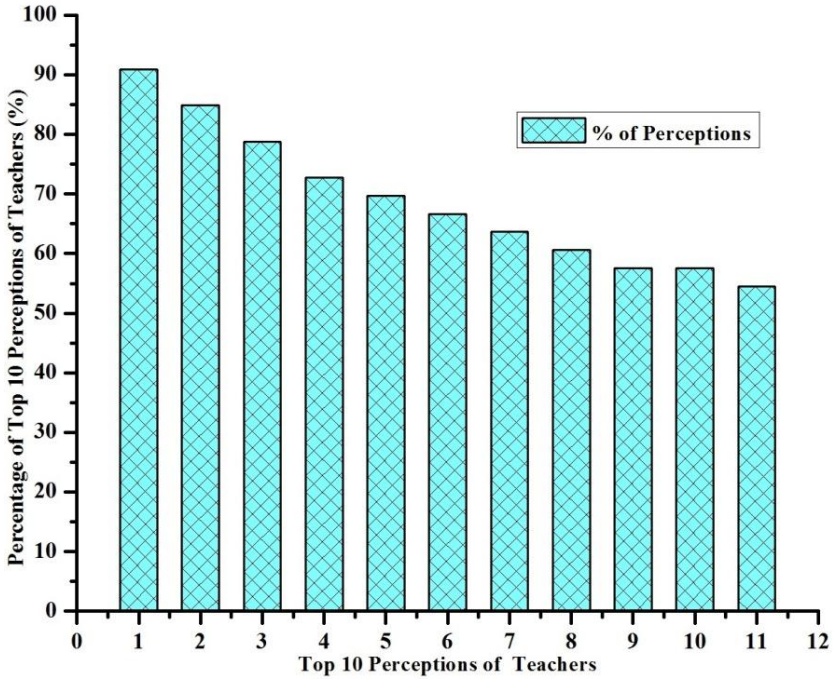

Figure 12: Overall top 10 perceptions of teachers

Table 4.7.15 and Figure 12 show the overall top 10 perceptions of teachers about the prospects of vocational education. The percentage of perceptions of teachers ranges from 54.55% and 90.91%.

4.8 Perception of Parents about the Prospects of Vocational Education

The perception of parents about the prospects of vocational education is presented for analysis and interpretation under the following heads:

- About introducing new vocational courses in higher secondary schools
- Vocational courses which have better prospects for job placement in Mizoram
- Vocational courses which have better prospects for job placement outside Mizoram
- Vocational courses which have better prospects for self employment
- For which group of students vocational courses was best suitable for
- About offering more vocational courses in more school
- Ways in which vocational education can be improved
- About State Government in playing its role

Table 4.8.1: Parents' perceptions on whether the state needs to introduce some more vocational courses in Mizoram

Course Wise Distribution of Parents									
Perception	**Computer Technique (12 Parents)**	**Computer Software Application (4 parents)**	**Commercial Garment Design and Making (4 Parents)**	**Automobile Engineering Technology (4 Parents)**	**Medical Laboratory Technician (4 Parents)**	**Horticulture (6 Parents)**	**Sericulture (8 Parents)**	**Office Secretaryship (2 Parents)**	**Total (No. of Parents=44)**
	No. & %	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**	**No. & %**
Yes	6 (24)	3 (12)	3 (12)	2 (8)	2 (8)	3 (12)	4 (16)	2 (8)	25 (56.82)
If Yes, which courses?									
Dairying (Agriculture)	0	0	2 (50)	0	0	1 (25)	1 (25)	0	4 (9.09)
Vegetable Seed Production	1 (20)	0	1 (20)	1 (20)	1 (20)	0	1 (20)	0	5 (11.36)
Floriculture	0	0	0	0	0	1 (50)	0 (50)	1	2 (4.55)
Marketing & Salesmanship (Business & Commerce)	2 (50)	1 (25)	0	1 (25)	0	0	0	0	4 (9.09)
Steno-typist	0	0	0	0	0	0	0	0	0
Lineman (Engineering & Technology	0	0	0	0	0	0	0	0	0
Clock and Watch Technology	0	0	0	0	0	0	0	0	0
Hospital Documentation (Health & Para-medical)	0	0	0	0	0	0	0	0	0
Food Preserving & Processing (home science)	1 (25)	1 (25)	0	0	1 (25)	1 (25)	0	0	4 (9.09)
Bakery & Confectionery	1 (25)	1 (25)	0	0	0	0	1 (25)	1 (25)	4 (9.09)
Catering &Restaurant Management	0	0	0	0	0	0	0	0	0
Photography (Humanities and Others)	1 (100)	0	0	0	0	0		0	1 (2.77)
Health Care & Beauty Culture	0	0	0	0	0	0	1 (100)	0	1 (2.77)

As reflected in Table 4.8.1, 56.82 per cent of parents of vocational students perceive that Mizoram needs to introduce some more vocational courses in higher

secondary school. The courses suggested are: Vegetable Seed Production suggested by 11.36 per cent, Dairying (Agriculture), Marketing and Salesmanship (Business & Commerce), Food Preserving & Processing (Home Science), Bakery & Confectionery suggested by 9.09 per cent, Floriculture by 4.55 per cent, Photography, and Health Care & Beauty Culture by 2.77 per cent of parents.

Parents of students from Computer Technique and Sericulture feel that Govt' of Mizoram need to introduce five more vocational courses, parents from Computer Software Application and Horticulture three more courses and the rest two more courses

Table 4.8.2: Parents' perception on whether vocational courses offered in Mizoram higher secondary stage is sufficient or not

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	5 (26.32)	2 (10.53)	1 (5.26)	2 (10.53)	2 (10.53)	4 (21.05)	2 (10.53)	1 (5.26)	19 (43.18)
No	7 (28.00)	2 (8)	3 (12)	2 (8)	2 (8)	2 (8)	6 (24)	1 (4)	25 (56.82)

A look at Table 4.8.2 makes us understand that while 43.18 per cent parents perceive vocational courses offered in Mizoram at Higher Secondary stage as sufficient, 56.82 per cent parents consider the courses as insufficient. Parents whose children pursue Computer Technique share the highest percentage of respondents.

Table 4.8.3: Parents' perception about the vocational courses which have prospects for better job placement in Mizoram

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	12 (80)		1 (6.67)	0	0	1 (6.67)	1 (6.67)	0	15 (34.09)
Computer Software Application	0	3 (100)	0	0	0	0	0	0	3 (6.82)
Commercial Garment Design and Making	0	0	3 (75)	0	0	0	1 (25)	0	4 (9.09)
Automobile Engineering Technology	0	0	0	4 (100)	0	0	0	0	4 (9.09)
Medical Laboratory Technician	0	0	0	0	4 (80)	1 (20)	0	0	5 (11.36)
Horticulture	0	0	0	0	0	4 (100)		0	4 (9.09)
Sericulture	0	0	0	0	0	0	6 (100)		6 (13.64)
Office Secretaryship	0	1 (33.33)	0	0	0	0	0	2 (66.67)	3 (6.82)

Table 4.8.3 shows that only low percentages of parents perceive the existing vocational courses as having prospects for better job placement in Mizoram. Computer Technique receives the highest response indicating that it is considered to be having better job placement in the state.

It is worth mentioning that parents from each course perceive the course pursued by their children as having best prospect for job placement in Mizoram.

Table 4.8.4: Parents' perception about the vocational courses which have prospects for better job placement outside Mizoram

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	11 (68.75)	0	1 (6.25)	1 (6.25)	0	1 (6.25)	2 (12.50)	0	16 (36.36)
Computer Software Application	0	3 (42.86)	0	1 (14.29)	0	1 (14.29)	1 (14.29)	1 (14.29)	7 (15.91)
Commercial Garment Design and Making	0	0	3 (75)	0	0	0	1 (25)	0	4 (9.09)
Automobile Engineering Technology	0	0	0	2 (100)	0	0	0	0	2 (4.55)
Medical Laboratory Technician	0	0	0	0	4 (80)	1 (20)	0	0	5 (11.36)
Horticulture	0	0	0	0	0	3 (100)	0	0	3 (6.82)
Sericulture	0	0	0	0	0	0	4 (100)	0	4 (9.09)
Office Secretaryship	1 (33.33)	1 (33.33)	0	0	0	0	0	1 (33.33)	3 (6.82)

What is revealed by Table 4.8.4 is that according to parents' perception, vocational courses offered in Mizoram have little prospect for job placement outside the state. This is indicated by the low percentage of parents ranging from 4.55 to 36.36 per cent only who perceive the courses as having prospect for job placement.

It is noteworthy that parents perceive the courses in which their children are enrolled as having better prospect for job placement outside the state.

Table 4.8.5: Parents' perception about the vocational courses which give better chance for self-employment

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Computer Technique	11 (78.57)	2 (14.29)	1 (7.14)	0	0	0	0	0	14 (31.82)
Computer Software Application	0	2 (33.33)	0	0	0	2 (33.33)	1 (16.67)	1 (16.67)	6 (13.64)
Commercial Garment Design and Making	0	0	3 (100)	0	0	0	0	0	3 (6.82)
Automobile Engineering Technology	0	0	0	4 (100)	0	0	0	0	4 (9.09)
Medical Laboratory Technician	0	0	0	0	4 (100)	0	0	0	4 (9.09)
Horticulture	0	0	0	0	0	4 (100)	0	0	4 (9.09)
Sericulture	1 (12.50)	0	0	0	0	0	7 (87.50)	0	8 (18.18)
Office Secretaryship	0	2 (66.67)	0	0	0	0	0	1 (33.33)	3 (6.82)

As can be seen from Table 4.8.5, only few parents perceive vocational courses offered in Mizoram as giving better chance for self-employment which is indicated by the low percentage of respondents for each course. The highest percentage of response (31.82) is received by Computer Technique implying that it is the course perceived to be as having best chance for self-employment. The percentages of responses received by other vocational courses are so low that they spread from 6.82 to 13.64 per cent.

It is worth noting that parents from all the vocational courses except Office Secretaryship perceive the courses pursued by their children as giving better chance for self-employment.

Table 4.8.6: Parents' perception about offering vocational courses in more schools

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It is needed as more students can be enrolled to study vocational courses	1 (20)	2 (40)	1 (20)	1 (20)	0	0	0	0	5 (11.36)
It is needed as there will be more opportunities for students in different areas to study vocational courses	8 (27.59)	2 (6.90)	3 (10.34)	1 (3.45)	4 (13.79)	3 (10.34)	6 (20.69)	2 (6.90)	29 (65.91)
It is needed as vocational courses will become more popular among the people	2 (28.57)	0	0	1 (14.29)	0	3 (42.86)	1 (14.29)	0	7 (15.91)
It is needed to meet the priority need of the local area/ people	1 (33.33)	0	0	1 (33.33)	0	0	1 (33.33)	0	3 (6.82)

Table 4.8.6 gives us the information that majority of parents (65.91%) fell the need of offering vocational courses in more schools as these will be more opportunities for students in different areas to study vocational courses. Out of these respondents, the highest percentage is derived from Computer Technique course.

Other needs are negligible as the percentage of respondents for these are quite low ranging from 6.82 to 15.91 per cent.

Table 4.8.7: Parents' perception on for which group of students vocational course is suitable

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
For poor performing students	1 (100)	0	0	0	0	0	0	0	1 (2.27)
For average performing students	9 (24.32)	3 (8.11)	4 (10.81)	3 (8.11)	4 (10.81)	6 (16.22)	6 (16.22)	2 (5.41)	37 (84.09)
For good performing students	2 (33.33)	1 (16.67)	0	1 (16.67)	0	0	2	0	6 (13.64)

Table 4.8.7 informs us that vocational course is most suitable for average performing students as 84.09 per cent of parents perceive so. Out of these parents who hold this view, the highest percentage (24.32) is contributed by Computer Technique.

The view that vocational course is suitable for poor performing students is held only by one per cent whose son/ daughter is in Computer Technique.

Parents from Computer Technique, Computer Software Application and Automobile Engineering Technology who constitute only 13.64 per cent of the parents perceive vocational course as suitable for good performing students.

Table 4.8.8: Parents' perception about in what ways vocational courses can be improved

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
By providing more infrastructural facilities	3 (10)	4 (13.33)	3 (10)	4 (13.33)	3 (10)	5 (16.67)	7 (23.33)	1 (3.33)	30 (68.18)
By revising the syllabus	0	0	0	0	0	0	0	0	0
By introducing more courses	0	0	0	0	0	0	0	1 (100)	1 (2.27)
By improving the service conditions of vocational teachers	6 (75)	0	0	0	1 (12.50)	0	1 (12.50)	0	8 (18.18)
By having more experienced teachers	2 (66.67)	0	1 (33.33)	0	0	0	0	0	3 (6.82)
By improving on the job training	1 (33.33)	0	0	0	0	2 (66.67)	0	0	3 (6.82)
By enhancing the professional skills of vocational teachers through training programs	0	0	0	0	0	1 (100)	0	0	1 (2.27)

On the ways by which vocational courses can be improved, Table 4.8.8 tells us that majority of parents (68.18%) are in favour of providing more infrastructural facilities. This idea generates from parents from all the courses where Sericulture contributes the highest share (23.33%).

Other ways suggested such as improving the service conditions of vocational teachers, improving on-the-job training, having more experienced teachers, introducing more courses and by enhancing the professional skills of vocational teachers through training programs are not that relevant as percentages of parents suggested them are low ranging from 2.27 to 18.18 per cent.

Table 4.8.9: Parents' perception about the state government in playing its role in relation to vocational education at higher secondary school stage in Mizoram

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
It has done what it is supposed to do	4 (26.67)	2 (13.33)	2 (13.33)	2 (13.33)	1 (6.67)	2 (13.33)	1 (6.67)	1 (6.67)	15 (34.09)
It should give more importance to vocational education	3 (42.86)	0	0	0	1 (14.29)	2 (28.57)	0	1 (14.29)	7 (15.91)
It should provide more funds for vocational courses	0	0	0	0	0	1 (33.33)	2 (66.67)	0	3 (6.82)
It should offer more courses in more schools	0	0	0	0	0	0	2 (100)	0	2 (4.55)
It should give more grants for the maintenance of the existing vocational courses	0	0	0	1 (50)	0	1 (50)	0	0	2 (4.55)

We find from Table 4.8.9 that only 34.09 per cent of parents perceive the Government of Mizoram as having done what it is supposed to do. However, suggestions on what the state government should do come from few parents only. Only 15.91 per cent parents are of the view that it should give more importance to vocational education, 6.82 per cent that it should provide more funds for vocational courses, 4.55 per cent that it should offer more courses in more schools and it should give more grants for the maintenance of the existing vocational courses.

The suggestion that the State Government should give importance to vocational education originates mainly from parents from Computer Technique and also from Horticulture, Medical Laboratory Technician and Office Secretaryship. The

ones who suggest that the Government should provide more funds for vocational courses are from Sericulture and Horticulture

Table 4.8.10: Parents' perception on whether they are satisfied with the vocational course being pursued by their sons/ daughters

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	7 (23.33)	2 (6.67)	3 (10)	3 (10)	3 (10)	5 (16.67)	7 (23.33)	0	30 (68.18)
No	5 (88.33)	2 (33.33)	1 (16.67)	1 (16.67)	1 (16.67)	1 (16.67)	1 (16.67)	2 (33.33)	14 (31.82)

Table 4.8.10 clearly portrays that majority of the parents *i.e.*, 68.18 per cent are satisfied with the vocational course pursued by their son/daughter. Among these, parents with children from Computer Technique and Sericulture are most satisfied as they constitute the highest percentage *i.e.,* 23.33 per cent each. Others comprise of 16.67 per cent parents from Horticulture, 10 per cent each from Commercial Garment Design and Making, Automobile Engineering Technology and Medical Laboratory Technician, 6.67 per cent from Computer Software Application who are also satisfied with the vocational course pursued by their sons/daughters.

Table 4.8.11: Parents' perception on whether the vocational courses pursued by their children give better opportunity for employment than the general course

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	6 (23.08)	3 (11.54)	2 (7.69)	2 (7.69)	4 (15.38)	3 (11.54)	5 (19.23)	1 (3.85)	26 (59.09)
No	6 (42.86)	1 (7.14)	2 (14.29)	2 (14.29)	0	3 (21.43)	3 (21.43)	1 (7.14)	18 (40.91)

Table 4.8.11 shows that more than half of the parents (59.09%) perceive the vocational courses pursued by their children as giving better opportunity for employment than the general course.

Parents comprising of 23.08 per cent are from Computer Technique, 19.23 per cent from Sericulture, 15.38 per cent from Medical Laboratory Technician, and 11.54 per cent each from Computer Software Application and Horticulture. Less than 10 per cent parents are from Commercial Garment Design and Making, Automobile Engineering Technology and Office Secretaryship.

Table 4.8.12: Parents' perception on whether opportunity for further studies is limited for students pursuing vocational courses

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	7 (25)	2 (7.14)	2 (7.14)	3 (10.71)	3 (10.71)	4 (14.29)	5 (17.86)	2 (7.14)	28 (63.64)
No	5 (50)	2 (20)	2 (20)	1 (10)	1 (10)	2 (20)	3 (30)	0	16 (36.36)

Table 4.8.12 depicts parents' perception about the opportunity of vocational course for higher studies.

As perceived by 63.64 per cent parents, opportunity for further studies is limited for students pursuing vocational courses. Of these parents, 25 per cent are from Computer Technique, 17.86 per cent from Sericulture and 14.29 per cent are from Horticulture.

Other parents who hold the same perceptions are from Automobile Engineering Technology and Medical Laboratory Technician, who form 10.71 per cent, Computer Software Application, Commercial Garment Design and Making and Office Secretaryship each of whom constitute 7.14 per cent.

Table 4.8.13: Parents' perception on whether their daughters/sons should pursue higher education in vocational course than in general course

Perception	Course Wise Distribution of Parents								
	Computer Technique (12 Parents)	Computer Software Application (4 parents)	Commercial Garment Design and Making (4 Parents)	Automobile Engineering Technology (4 Parents)	Medical Laboratory Technician (4 Parents)	Horticulture (6 Parents)	Sericulture (8 Parents)	Office Secretaryship (2 Parents)	Total (No. of Parents=44)
	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %	No. & %
Yes	8 (26.67)	2 (6.67)	3 (10.00)	3 (10.00)	3 (10.00)	5 (16.67)	5 (16.67)	1 (3.33)	30 (68.18)
No	4 (28.87)	2 (14.29)	0	1 (7.14)	1 (7.14)	1 (7.14)	3 (21.43)	2 (14.29)	14 (31.82)

A cursory glance at Table 4.8.13 enlightens us that majority of parents (68.18%) want their daughters/sons to pursue higher education in vocational course than in general education.

Of these, parents from Computer Technique constitute the largest percentage *i.e.,* 26.67 per cent. The rest are constituted by parents from Horticulture and Sericulture forming 16.67 per cent each, from Commercial Garment Design and Making, Automobile Engineering Technology and Medical Laboratory Technician forming 10 per cent each, from Computer Software Application and Office Secretaryship comprising of 6.67 per cent and 3.33 per cent respectively.

Table 4.8.14: Most frequently stated perceptions of parents

S.No.	Perception Of Parents About The Prospects Of Vocational Education	Most Frequently Stated Perceptions Of Parents	%
1	Parents' perception on whether the State need introduce more vocational courses in Mizoram	Vegetable Seed Production	11.36
2	Parents' Perception on whether vocational courses offered in Mizoram higher secondary stage is sufficient or not	No	56.82
3	Parents' perception about vocational courses which have prospects for better job placement in Mizoram	Computer Technique	34.09
4	Parents' perception about vocational courses which have prospects for better job placement outside Mizoram	Computer Technique	36.36
5	Parents' perception about vocational courses which give better chance for self-employment	Computer Technique	31.82
6	Parents' perception about offering vocational courses in more schools	It is needed as there will be more opportunities for students in different areas to study vocational courses	65.91
7	Parents' perception on for which group of students vocational course is suitable	For average performing students	79.55
8	Parents' perception about what way vocational education can be improved	By providing more infrastructural facilities	68.18
9	Parents' perception about the State Government in playing its role in relation to vocational education at higher secondary school level in Mizoram.	It has done what it is supposed to do	34.09
10	Parents' perception whether they are satisfied with the vocational course being pursued by their sons/ daughters	Yes	68.18
11	Parents' perception whether the vocational courses being pursued by their children gives better opportunity for employment than the general course.	Yes	59.09
12	Parents' perception whether opportunity for further studies is limited for students pursuing vocational courses	Yes	63.64
13	Parents' perception about their daughter/son should pursue higher education in vocational courses than general course	Yes	68.18

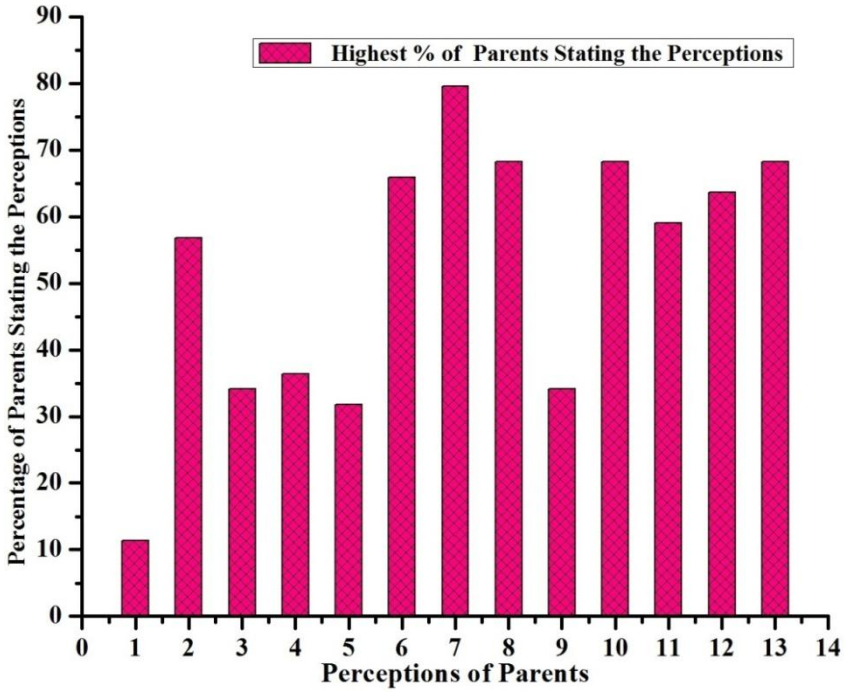

Figure 13: Most frequently stated perceptions of parents

Table 4.8.14 and Figure 13 show the most frequently stated perceptions of parents about the prospects of vocational education.

Table 4.8.15: Overall top 10 perceptions of parents

S.No.	Top 10 Questions of Perceptions of Parents	Perceptions of Parents	%
1	Parents' perception on for which group of students vocational course is suitable	For average performing students	84.09
2	Parents' perception about in what ways vocational courses can be improved	By providing more infrastructural facilities	68.18
3	Parents' perception on whether they are satisfied with the vocational course being pursued by their sons/ daughters	Yes	68.18
4	Parents' perception about their daughters/sons should pursue higher education in vocational courses than general course	Yes	68.18
5	Parents' perception about offering vocational courses in more schools	It is needed as there will be more opportunities for students in different areas to study vocational courses	65.91
6	Parents' perception on whether opportunity for further studies is limited for students pursuing vocational courses	Yes	63.64
7	Parents' perception on whether the vocational courses being pursued by their children gives better opportunity for employment than the general course	Yes	59.09
8	Parents' perception on whether vocational courses offered in Mizoram higher secondary stage is sufficient or not	No	56.82
9	Parents' perception on whether vocational courses offered in Mizoram higher secondary stage is sufficient or not	Yes	43.18
10	Parents' perception on whether the vocational courses being pursued by their children gives better opportunity for employment than the general course	No	40.91
11	Parents' perception about the vocational courses which have prospects for better job placement outside Mizoram	Computer Technique	36.36
12	Parents' perception about the vocational courses which have prospects for better job placement in Mizoram	Computer Technique	36.36
13	Parents' perception whether opportunity for further studies is limited for students pursuing vocational courses	No	36.36
14	Parents' perception about the vocational courses which have prospects for better job placement in Mizoram	Computer Technique	34.09
15	Parents' perception about the State Government in playing its role in relation to vocational education at higher secondary school stage in Mizoram	It has done what it is supposed to do	34.09

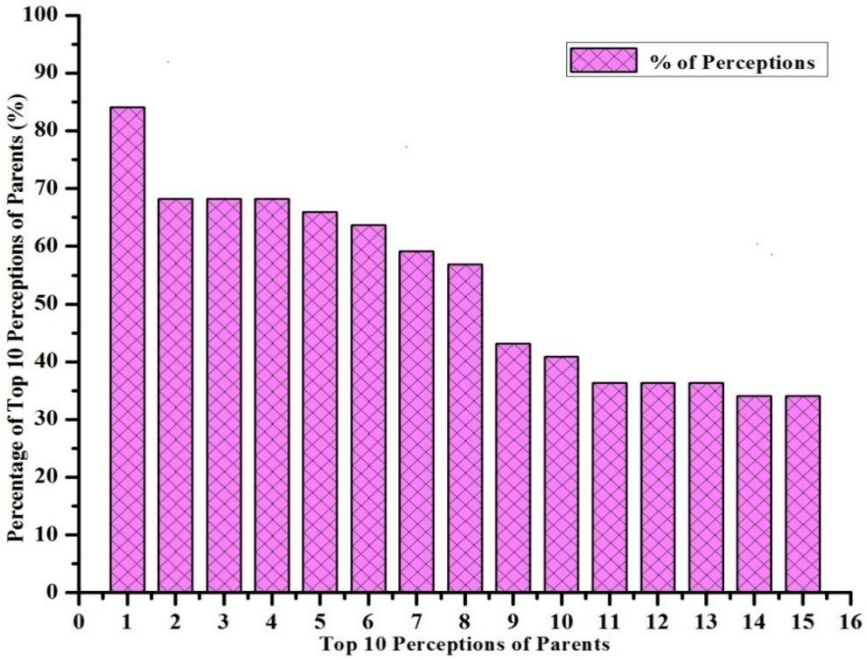

Figure 14: Overall top 10 perceptions of parents

Table 4.8.15 and Figure 14 reveal the overall top 10 perceptions of parents about the prospects of vocational education.

CHAPTER V

MAJOR FINDINGS AND CONCLUSION, DISCUSSION, IMPLICATIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDIES

CHAPTER V
MAJOR FINDINGS AND CONCLUSIONS, DISCUSSION, IMPLICATIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

In this chapter, major findings and conclusion, implications of the study, recommendations and suggestions for further research are presented.

Major findings and Conclusions are arranged in the following order:

1. Findings Related to Status of Vocational Education at Higher Secondary Stage of Education in Mizoram:
2. Findings and Conclusions Related to Background of Students
3. Findings and Conclusions Related to Background of Teachers
4. Finding and Conclusions Related to Problems faced by Students
5. Findings and Conclusions Related to Problems faced by Teachers
6. Findings and Conclusions Related to Perceptions of Students About the prospects of Vocational Education
7. Findings and Conclusions Related to Perceptions of Teachers About the prospects of Vocational Education
8. Findings and Conclusions Related to Perception of Parents About the prospects of Vocational Education

5.1 Findings and Conclusions Related to Status of Vocational Education at Higher Secondary Stage of Education in Mizoram

5.1.1 Courses offered with year of introduction

These were eight vocational courses offered at 14 higher secondary schools in Mizoram. These were:

1) Computer Technique offered in 6 higher secondary schools:
   a) Govt. Mizo HSS since 2002
   b) Helen Lowry HSS since 2006
   c) K.M. HSS since 2008

2) Computer Software Application was firstly introduced in 2008 and again in 2010.

3) Computer Garment Design and Making was started in 2009 at 2 higher secondary schools.

4) Two higher secondary schools offered Automobile Engineering Technology which was started in 2008.

5) Medical Laboratory Technician was introduced in the year 2007 at two schools.

6) Horticulture was firstly introduced in 2007 at two schools and secondly in 2009.

7) Sericulture was offered at 4 higher secondary schools. It was started for the first time in 2008 and again in 2009 and 2010.

8) Office Secretaryship was the only vocational course offered at one school only. It was started in this school in the year 2009.

5.1.2 Type of higher secondary schools offering vocational courses

Among the higher secondary schools offering vocational courses, 71.43 per cent were Government schools, 21.43 per cent deficit schools and 7.14 per cent Adhoc Aided schools.

5.1.3 Admission Notification

64.29 per cent of higher secondary school offering vocational courses made admission notification. 42.86 per cent of these schools notified admission through newspaper, 28.57 per cent through school notice board and 7.17 per cent used television for notification of admission.

5.1.4 Criteria followed for admission

92.86 percent higher secondary schools gave admission on first come first serve basis. Only 7.14 schools conduct interview for selection of candidates.

5.1.5 Course wise distribution of range of fees paid at the time of admission

1) Sericulture has the highest range of fees *i.e.*, Rs 3000; the lowest fee is 1300 while the highest fee is Rs 5300.

2) Medical Laboratory Technician has the lowest range of fees *i.e.*, Rs 200; the highest fees is 5700 while the lowest fees is 5500.

5.1.6 School management wise range of fees in rupees

On the basis of school management the fees in different course are not same; Deficit HSS took more fees than Government HSS in all the courses.

5.1.7 Students enrollment

1) During the years 2014, 2015 and 2016, enrollment in Classes XI and XII of vocational courses was highest in Computer Technique course with 816 students seconded by 435 students and followed by Medical Laboratory Technician with 353 students enrolled.

2) The least number of students *i.e.*, 59 was found in Office Secretaryship followed by Commercial German Design and Making, and Automobile Engineering Technology each with 136 students enrolled.

5.1.8 Type of school building

1) Among the higher secondary school offering vocational education, 64.29 per cent of the school buildings were pucca and 35.71 per cent of the school buildings were semi pucca. There was no kutcha type of school building.

2) 92.86 per cent of the higher secondary schools have their own school building while 7.14 per cent of the higher secondary schools were run in rented buildings.

5.1.9 Provision of water, provision of electricity, provision of practical room and provision of school compound for doing practical work

1) Provision for water was sufficient in 92.86 per cent of higher secondary schools.

2) Electricity was available and regular in 57.14 per cent, available but irregular in 42.86 per cent.

3) Practical room was suitable in 85.71 per cent schools.

4) 85.71 per cent schools had suitable compound for doing practical work.

5.1.10 Condition of classrooms for vocational subjects

1) The classroom conditions for Computer Technique were 33.33 per cent very good, 33.33 per cent good and 33.33 percent average.

2) 50 per cent classrooms for Computer Software Application were good and 50 per cent were average.

3) 100 per cent classrooms of Commercial Garment Design and Making were in good conditions.

4) Automobile Engineering Technology had 50 per cent classrooms in very good condition and 50 per cesnt in average condition.

5) 50 per cent classrooms were very good and 50 percent were in good conditions for Medical Laboratory Technician course.

6) 66.67 per cent were average and 33.33 percent were poor in Horticulture.

7) Conditions of classroom for Sericulture were average in 25 per cent, poor in 25 per cent and good in 50 per cent higher secondary school.

8) 100 per cent of classroom conditions were in average conditions for Office Secretaryship.

5.1.11 Conditions of furniture for vocational subjects in hss

The number of desks and benches of all the higher secondary schools offering vocational courses were adequate in 85.71 per cent of the schools.

5.1.12 Instructional time allotted for theory and practical classes

Only three courses *i.e.,* Computer Software Application, Commercial Garment Design and Making, and Office Secretaryship allotted 70 per cent of instructional time for both theory and practical classes as required by the Scheme of Vocationalisation of secondary education.

5.1.13 Methods of teaching

Lecture and Practical methods were employed for imparting the skills for all the vocational courses. Apart from these, Home assignment, Project Work and

Experiment methods were popularly used for vocational education at higher secondary stage of education in Mizoram.

5.1.14 Procedure of evaluation

For evaluation of students offering vocational courses, Practical, Tests, Project Work and Assignments were popularly used. The use of class test, internal test and weekly test indicates that the evaluation system was continuous. Seminar for evaluation of students was not popularly employed. The evaluation system employed taken as a whole indicates that it was comprehensive in many cases.

5.2 Findings and Conclusions Related to Background of Students

5.2.1 Class and course wise distribution of students

1) Of the total number of students *i.e.*, 618 enrolled in vocational courses at higher secondary level, 58.41 per cent were students of Class XI and 41.59 per cent Class XII.

2) Among vocational students of Class XI and XII, the most popular course was Computer Technique followed by Medical Laboratory Technician and Horticulture. In class XI, the course having the least number of students enrolled was Computer Software Application whereas in Class XII, it was Commercial Garment Design and Making.

5.2.2 Hometown of the students

Students from Aizawl City constituted the highest percentage (*i.e.*, 45.63%) of vocational students whereas 21.84 per cent were from villages, 17.48 per cent were from District Headquarters and 15.05 per cent were from the towns.

5.2.3 Local and non-local student

The percentages of non-local students were higher than those of local students in Automobile Engineering Technology, Horticulture and Sericulture.

5.2.4 Age of the students

Students of 17 years old constituted the percentage of 34.46 and students of 16 years old formed another 21.84 per cent. These students were in the right age group for Classes XI and XII.

As many as 40.28 per cent of vocational students were 18 and above years old who were over-aged for secondary classes. This indicated that they were repeaters of previous class or classes.

5.2.5 Gender

There were 58.41 per cent male students and 41.58 per cent female students.

5.2.6 Fathers' occupation

Self employment constituted the highest percentage of occupation among fathers of vocational students followed by Government service, business and service in private company. Computer Technique was the course opted by the largest percentage of students irrespective of their fathers' occupation.

5.2.7 Fathers' educational qualification

Majority (61.17%) of the fathers of vocational students were with HSLC and below qualifications. Only 16.50 per cent of the fathers were graduates, 2.75 per cent post-graduates, 0.32 per cent M.Phil and 0.65 per cent Ph.D degree holders.

5.2.8 Mothers' occupation

Self-employment constituted the highest percentage of occupation among mothers of vocational students followed by business, government service and service in private company. There were some mothers who were engaged in other occupations. Computer Technique is the most popular course among students irrespective of their mothers' occupations.

5.2.9 Mother's educational qualification

Majority (73.46%) of the mothers of vocational students were with HSLC and below qualifications. Only 7.77 per cent of the mothers were graduates, 1.13 per cent post-graduates, and 0.32 per cent Ph.D degree holders.

5.2.10 Educational background in Class X

1) The majority (99.68%) of higher secondary school students opting vocational courses passed HSLC under Mizoram Board of School Education and that only 0.32 per cent passed it under Central Board of School Education. While 46.76 per cent of the students passed HSLC in 2014, 28.80 per cent passed in 2013. The rest passed it

prior to 2013 which may imply that they did not continue their studies right away or they have repeated some classes.

2) Divisions of passing the HSLC examinations indicate that students pursuing vocational courses were mainly average and below average students. There were 0.16 per cent who passed HSLC in Distinction and 8.25 per cent who passed it in I Division. The rest 38.35 per cent and 53.24 per cent passed HSLC in II Division and III Division respectively.

5.2.11 Repeaters in different stage of school

Many students pursuing vocational courses at higher secondary stage of education were repeaters of classes at different stages of education such as primary, middle, high schools and higher secondary stages. High School was the stage in which percentage of repeaters was highest *i.e.*, 20.39 per cent followed by higher secondary school with 12.59 per cent repeaters, middle school with 11.16 per cent repeaters and primary school with 10.84 per cent repeaters.

5.2.12 Helpers in decision making to study vocational courses

Majority of the students *i.e.,* 79.29 per cent were decision makers in pursuing vocational course, parents of 17.31 per cent of students help their children in making the decision to study vocational courses. Only few students *i.e.,* 2.10 per cent were advised by teachers and 1.29 per cent by friends to study vocational courses.

5.3 Findings and Conclusions Related to Background of Teachers

The major findings on teachers' background at the time of data collection were classified as follows:

5.3.1 Hometown of vocational teachers

1) The largest percentages of vocational course teachers (57.57%) were from Aizawl City and teachers from district headquarters constituted the second largest percentage (*i.e.*, 30.30%). Only 9.09 per cent and 3.03 per cent of the teachers were from towns and villages respectively.

2) The largest percentages of teachers from Aizawl City (31.58%) were Computer Technique teachers and second largest percentage of teachers (15.71%) were teachers of Computer Software Application and Office Secretaryship. No teacher from Aizawl City was found in Horticulture course.

5.3.2 Age

There was no teacher below 25 years whereas 3.03 per cent teachers were above 41 years. Majority of the teachers (57.57%) were between 26 and 30 years followed by 31 and 35 years (27.27%). There were few teachers (12.12%) between 36 and 40 years.

5.3.3 Gender

Male teachers (54.54%) were more than female teachers (45.45%).

5.3.4 Teachers' academic record in HSLC

1) A high percentage (96.97 %) teacher passed HSLC under MBSE whereas only 3.03 per cent teachers passed the same under CBSE.

2) The largest percentage of teachers passed HSLC way back in 1996 to 2002 and the rest 27.27 per cent each in 1989 to 1995 and 2003 to 2009 respectively.

5.3.5 Teachers' academic record in HSSLC

1) A high percentage *i.e.*, 87.88 per cent teachers passed HSSLC under MBSE whereas only 12.12 per cent teachers passed the same under CBSE.

2) The largest percentage of teachers (54.55%) passed HSSLC in 2001 to 2005, 24.24 per cent and 15.15 per cent in 1996 to 2000 and 2006 to 2010 respectively. A few percentages of teachers passed in 1991 to 1995.

3) Teachers who passed HSSLC in II Division constituted the largest percentage (57.58%). There were no teachers who passed HSSLC in Distinction. The rest 24.24 per cent and 18.18 per cent passed in III and I Division respectively.

5.3.6 Teachers' academic record in Bachelor's Degree

1) A high percentage of teachers i.e., 39.39 per cent passed HSLC under MZU, whereas 36.36 per cent and 24.24 per cent passed under NEHU and other universities respectively.

2) The largest percentage of teachers (*i.e.*, 63.64%) passed Bachelor Degree in 2005 to 2009 and the second largest percentage *i.e.*, 21.21 passed in 2000 to 2004. A few percentages of 9.09 and 6.06 each passed in 2010 to 2014 and 1995 to 1999.

3) A high percentage of teachers (51.52%) passed Bachelors Degree in II Division and 36.36 per cent of teachers passed in I Division. There were no teachers who passed in III Division while only 3.03 per cent passed in Distinction.

5.3.7 Teachers' academic record in Master's Degree

1) There were 75.76 per cent post graduate teachers and majority of them *i.e*., 72 per cent have completed their Masters' Degree under the universities other than MZU and NEHU.

2) The largest percentage of teachers (*i.e*., 40%) passed in 2010 to 2014, 40 per cent passed in 2005 to 2009 and 16 per cent of them passed in 2000 to 2004.

3) Majority of the teachers (68%) passed in I Division. Besides, only 4 per cent passed in III Division and 24 per cent passed in II Division.

5.3.8 Educational qualifications

All the teachers of various vocational courses had the required educational qualifications for their own subjects as per norms of SCERT.

5.3.9 Year of appointment

Majority of the teachers (66.67%) were appointed in 2010, 12.12 per cent of teachers were appointed in 2007. Each 9.09 per cent teachers were appointed in 2006 and 2008 and a few per cent of teachers (3.03%) were appointed in 2009.

5.3.10 Nature of appointment

Majority of the teachers *i.e*., 84.85 per cent teachers were appointed on contractual basis. Only 3.03 per cent teachers were appointed as regular teachers and 12.12 per cent were temporary teachers. There were no part time teachers.

5.3.11 Teaching experience before joining

There were 18.18 per cent teachers who had teaching experience before joining while 81.82 per cent teachers had no teaching experience.

5.3.12 Teachers who underwent training

1) Computer Technique: 60 per cent of teachers underwent training.

2) Computer Software Application: 25 per cent of teachers underwent training.

3) Commercial Garment Design and Making: There was no teacher who attended any kind of teachers' training.

4) Automobile Engineering Technology: 50 per cent of teachers attended training.

5) Medical Laboratory Technician: 33.33 per cent of teachers attended training.

6) Horticulture: 33.33 per cent of teachers underwent training.

7) Sericulture: 66.67 per cent of teachers underwent training.

8) Office Secretaryship: 33.33 per cent of teachers underwent training.

5.4 Findings and Conclusions Related to Problems faced by Students

5.4.1 Problems regarding the vocational course they pursued

1) Worry about college admission and further studies were the biggest problem among the vocational students which was cited by 49.35 per cent students.

2) The next biggest problem was worry about job placement as cited by 35.60 per cent of students.

3) Other problems cited by 20.33 per cent and below in order of their intensity were: the course not of their first choice, thinking of changing the subject into general stream, high admission fees, not interested in the course and other streams looking down upon us.

4) Out of 49.35 per cent students who were worry about college admission and further studies, 30.82 per cent were from Computer Technique, 23.28 per cent were from Medical Laboratory Technician and 17.38 per cent were from Horticulture.

5) Students who were worry about job placement comprising of 35.60 per cent of vocational students were also mainly from Computer Technique and Medical Laboratory Technician who formed 42.73 per cent and 27.73 per cent respectively of students with this problem.

5.4.2 Problems faced related to facilities

1) Insufficient equipments was a problem for 40.45 per cent of students, irregular power supply for 32.36 per cent, congested classroom for 29.13 per cent and insufficient furniture for 13.59 per cent of the students.

2) The highest percentage of students stating the problems of insufficient equipments, congested classrooms and irregular power supply was from Computer Technique course whereas the highest percentage of students citing insufficient furniture for all the students was from Office Secretaryship.

5.4.3 Problems with regards to practical work

1) Insufficient number of practical classes conducted was stated as a problem by 38.03 per cent, irregular supply of electricity by 26.38 per cent, too congested practical room/ laboratories by 22.65 per cent, and lack of required space for doing practical work by 20.71 per cent.

2) Out of the students facing problems related to practical work, the highest percentages was from Computer Technique course and Computer Software Application was the course having the least number of students facing the problems.

5.4.4 Problems regarding textbook

1) Costly textbook was the highest problem faced by 32.69 per cent of students. 'Textbooks not available in all the subjects' was the second highest problem faced by 30.74 per cent of students and the problem 'textbooks needed to be procured from outside Mizoram' was faced by 26.70 per cent of the students. Other problems such as 'do not have textbooks', 'textbooks not available in time' and 'textbooks not available in the market' were faced by 24.11 per cent, 23.62 per cent and 16.02 per cent students respectively.

2) Among the students stating the problems related to textbooks, most of them were those pursuing courses of Computer Technique, Medical Laboratory Technician and Horticulture.

5.4.5 Problems with regard to contents of the textbooks

1) Unavailability of textbooks written in Mizo was the highest problem faced by 31.72 per cent of students. Contents of the textbooks were difficult to understand for 29.77 per cent and 5.83 per cent find that textbooks did not cover the whole syllabus.

2) Students pursuing Computer Technique course were mostly the ones who stated various problems related to contents of textbooks**.**

5.4.6 Problems related to teachers

1) The highest problem that the students faced related to teacher was unfriendly attitude of teachers towards students mentioned by 20.55 per cent. Irregularity of teacher in taking class was the second highest problem stated by 18.12 per cent of teachers and for 7.44 per cent of students, insufficient number of teachers was a problem.

2) Out of the few students claiming to have problems related to teachers, students of Horticulture constituted the highest percentage who mentioned irregularity of teachers in taking classes and insufficient number of teachers as prominent problems.

5.4.7 Problems of students relating to on-the-job training

1) A major problem of students relating to on-the-job training is that the training centre was too far from school for 14.72 per cent of the students. For 13.75 per cent of students, their problem was that the training centre was not well equipped.

2) For Computer Technique students, 'the training centre not well-equipped' was the biggest problem followed by 'the centre too far from school' and vice versa for Horticulture students.

5.4.8 Problems of students relating to method of teaching

36.25 per cent of the students faced problem as time allocated for practical class was not enough and 21.52 per cent of students found it difficult to understand the way their teachers taught them. For 16.99 per cent of students, theory class was not helpful to understand the concept and practical class was not helpful enough to develop their skills for 9.39 per cent. Time allocated for theory class was not enough for 8.90 per cent of students and for 8.25 per cent of students, the methods of teaching adopted by the teachers were not helpful/ effective enough.

5.5 Findings and Conclusions Related to Problems Faced by Teachers

Major findings related to problems faced by teachers of vocational education at the higher secondary stage were as follows:

5.5.1 Problems related to salary

1) 60.61 per cent teachers faced problems due to irregular payment of salary and 33.33 per cent teachers took their salary not at par with that of the general courses teachers as a problem.

2) Among the teachers who faced problems due to irregular payment of salary, 35 per cent were Computer Technique teachers while teachers of Automobile Engineering Technology and Office Secretaryship have no problem at all.

3) Salary not at par with that of the general teachers was pointed out by 36.36 per cent teachers of Computer Technique and 9.09 to 18.18 per cent of other course teachers except teachers of Commercial Garment Design &Making and Medical Laboratory Technician.

5.5.2 Problems related to insufficient number of vocational teachers

1) 66.67 per cent of teachers have problems of heavy workload, 21.21 per cent have to teach the papers in which they were not confident and 9.09 per cent faced difficulty as they cannot attend any training.

2) Among the teachers whose workload was too heavy, 22.73 per cent was Computer Technique teachers, 13.64 per cent to 18.18 per cent were other course teachers.

3) Each 28.57 per cent teachers of Computer Software Application and Commercial Garment Design and Making and each 14.29 per cent teachers of Computer Technique, Automobile Engineering Technology and Sericulture have to teach the papers in which they were not confident.

4) Each 33.33 per cent teachers of Computer Technique, Computer Software Application and Sericulture faced problems as they could not attend any training.

5) 66.67% of teachers claimed to have too heavy workload. Again, the highest percentage of teachers claiming to have this problem came from Computer Technique.

5.5.3 Problems related to facilities

1) 48.48 per cent teachers faced difficulty due to irregular power supply, 45.45 per cent due to congested classroom, and 30.30 per cent each due to electric wiring not in good condition and insufficient furniture for all the students.

2) Irregular power supply was a problem for a high percentage i.e. 43.8 teachers of Computer Technique, whereas it was not a problem at all for teachers of Horticulture and Sericulture.

3) Teachers having problems due to congested classroom were 26.7 per cent of Computer Technique and 6.7 per cent to 20 per cent teachers of other courses.

4) Electric wiring not in a good condition was a problem for 40 per cent teachers of Computer Technique, 30 per cent teachers of Horticulture, 20 per cent teachers of Medical Laboratory Technician and 10 per cent teachers of Computer Software Application.

5) As a whole, Computer Technique teachers constituted the highest percentages of teachers stating problems related to facilities.

5.5.4 Problems related to practical work

1) 36.36 per cent of teachers have problems due to small classrooms for doing practical work. Again 36.36 per cent teachers could not do practical work due to irregular power supply, 27.27 per cent faced problems due to insufficient furniture for all the students. For 18.18 of teachers insufficient space for doing practical work was the problem.

2) For 33.33 per cent teachers of Computer Technique, each 16.67 per cent teachers of Computer Software Application and Automobile Engineering Technology, 25 per cent teachers of Horticulture and 8.33 per cent teachers of Office Secretaryship classrooms were too small for practical work.

3) A high percentage of Computer Technique teachers i.e. 41.67, low percentages teachers of other courses ranging from 8.33 to 16.67 per cent faced difficulty in doing practical work due to irregular power supply whereas teachers of Horticulture and Sericulture were free from this problem.

4) Insufficient furniture created a problem for 44.44 per cent teachers of Computer Technique and 11.11 per cent of each teacher of other courses excluding Computer Software Application and Horticulture.

5) No sufficient space for doing practical work was a problem for 50 per cent teachers of Computer Technique and each 16.67 per cent each teachers of Automobile Engineering Technology, Medical Laboratory Technician and Horticulture.

6) As a whole, teachers having problems related to practical work were mostly teachers of Computer Technique.

5.5.5 Problems relating to equipment

1) Insufficient equipment for all the students was the biggest problem as a high percentage of teachers (60.61%) mentioned it. The need of frequent replacement of the available equipments was a problem for 45.45 per cent teachers and bad qualities of the available equipments was a problem for 42.42 per cent teachers.

2) For 27.27 per cent of teachers, replacing the equipments with their own expense sometimes was a problem, 21.21 per cent of teachers also pointed out that the available equipments do not last long. 18.18 per cent of teachers have problems as the required equipments were not available in time and were not available in the local market.

3) Among the teachers facing various problems related to equipments, Computer Technique teachers constituted the largest number or the highest percentage. Teachers of other vocational courses form a small percentage for each specific problem related to equipment.

5.5.6 Problems relating to students

1) The above table (Table 4.5.6) reveals that 60.61 per cent teachers faced problem as there were some students who want to change their subjects to other stream. 30.30 per cent teachers also have a problem of students dropping.

2) Students' wanting to change their subjects was a problem for each 15 per cent teachers of Computer Technique, Computer Software Application, Medical Laboratory Technician and Office Secretaryship and each 10 per cent teachers of

Commercial Garment Design and Making, Automobile Engineering Technology, Horticulture and Sericulture.

3) All the course teachers ranging from 10 per cent to 30 per cent teachers excluding Horticulture teachers have a problem of students dropping out.

5.5.7 Problems faced relating to study materials for teaching theory

1) 60.61 per cent of teachers faced the problem of unavailability of textbooks in the local market. Textbooks need to be procured from outside Mizoram was a problem for 42.42 per cent of teachers. For 39.39 per cent of teachers, textbooks not covering the whole syllabus and for 18.18 per cent of teachers, textbooks too costly were problems.

2) In each specific problem faced by teachers related to study materials for teaching, Computer Technique contributes the highest percentage of teachers stating it.

5.5.8 Problems with regard to contents of the textbooks/books

1) 21.21 per cent of teachers faced the problems of unavailability of textbooks written in Mizo and18.18 per cent of teachers faced the problem of contents not related to the syllabus. For 9.09 per cent of teachers, contents of the textbooks did not help in developing the skills of the learner and for 6.06 per cent; contents of the textbooks that were difficult to understand create a problem.

2) We can infer from data in the table that teachers problems related to contents of textbooks were so minor that only small percentages of teachers from various vocational courses make mention of these problems.

5.5.9 Problems faced in transacting the skills

1) 63.64 per cent of teachers of vocational subjects faced the problem in transacting the skills owing to students' weakness in English. The second highest problem was the available teaching aids that did not meet the requirements as mentioned by 27.27 per cent of teachers. Irregular electricity in the classroom creates problems for 24.24 per cent teachers and large size of the class creates problem in teaching for 12.12 per cent of teachers.

2) For all the course teachers ranging from 4.76 per cent to 23.81 per cent excluding teachers of Medical Laboratory Technician weakness of students in English was a problem. The available teaching aids did not meet the requirement and was a problem for each 33.33 per cent teachers of Computer Technique and Horticulture. It also creates a problem for each 11.11 per cent teachers of Automobile Engineering Technology, Sericulture and Office Secretaryship.

3) A high percentage i.e. 62.50 per cent teachers of Computer Technique, 25 per cent teachers of Computer Software Application and Automobile Engineering Technology faced problem in transacting the skills due to irregular electricity in the classroom. Large size of the class was a problem mainly for teaching of Computer Technique who form 75 per cent and for teachers of Automobile Engineering Technology who constitute 25 per cent of teachers facing this particular problem.

5.5.10 Problems faced in relation to on-the-job training

1) The training centre that was not well equipped was a problem for 36.36 per cent teachers. Out of which the highest percentage i.e. 41.67 per cent was constituted by teachers of Computer Technique.

2) For 24.24 per cent of teachers, the centre too far from school was a problem of which 37.50 per cent was constituted by teachers of Sericulture.

3) The table indicates that majority of vocational teachers do not faced any problem related to On-the-job training.

5.5.11 Problems faced regarding job placement

1) The majority teachers i.e. 54.55 per cent mentioned that job opportunities were very limited in Mizoram as the state was backward in industry. The second highest problem stated by 51.52 per cent of teachers was that plus 2 level was not accepted in many jobs.

2) Teachers of Computer Technique and Sericulture constitute the largest percentages (22.22 % respectively) of teachers highlighting ‘very limited job opportunities in Mizoram as the problem. Again, for the problem, ‘plus 2 level not accepted/ qualified in many jobs’, the highest percentage of teachers stating this was from teachers of Computer Technique.

5.6 Findings and Conclusions Related to Perceptions of Students about the Prospects of Vocational Education

Major findings related to perception of students of vocational courses were as follows:

5.6.1 Perception of students about introducing more vocational courses in higher secondary schools

1) 85.11 per cent of vocational students felt the need of introducing more vocational courses in Mizoram.

2) Photography was the most frequently preferred course suggested by 45.95 per cent respondents followed by Hospital Documentation (Health and Para medical) suggested by 43.36 per cent and Health Care and Beauty suggested by 36.24 per cent of the respondents.

3) Other courses perceived to be good for introduction in higher secondary schools in order of their importance were: Marketing & Salesmanship (Business & Commerce) recommended by 33.50 per cent, Lineman (Engineering & Technology) by 32.20 per cent respondent, Bakery & Confectionary by 27.35 per cent, Catering and Restaurant Management by 24.60 per cent, Dairying (Agriculture) by 23.79 per cent, Vegetable Seed Production by 23.14 per cent and Food Preserving and Processing (Home science) by 24.84 per cent of respondents.

4) Clock and Watch Technology, Steno-typing, Floriculture were the least suggested courses for introduction in higher secondary schools.

5.6.2 Vocational courses which have prospects for better job placement in Mizoram

1) Computer Technique was the course that highest percentage of the respondents i.e. 26.70 per cent thought to have better prospects for job placement in Mizoram. Computer Software Application and Medical Laboratory Technician came in second place as 15.86 per cent respondents perceived the subjects as having a good job placement opportunity in Mizoram.

2) Automobile Engineering Technology, Horticulture, Commercial Garment Design and Making occupied the third, fourth and fifth place as 7.44 per cent, 7.28

per cent and 5.66 per cent students respectively considered them as having better job placement opportunity in Mizoram. Sericulture and Office Secretaryship were the least chosen course as only 4.85 per cent and 0.97 per cent respectively perceived them as having prospects for job placement in the state.

5.6.3 Vocational courses which have prospects for better job placement outside Mizoram

1) Computer Technique was the course perceived to be having best prospect for job placement outside Mizoram followed by Computer Software Application receiving choices from 19.90 per cent students.

2) Rest of the vocational courses received few responses only ranging from 0.65 to 8.58 per cent which imply that they were not perceived to be having prospects for better job placement outside Mizoram.

5.6.4 Vocational courses giving better chance for self employment

1) Students comprising of 14.72 per cent respondents thought Computer Technique had a best chance. 12.46 per cent respondents and 10.03 per cent perceived Automobile Engineering Technology and Medical Laboratory Technician respectively as giving a better chance for self employment.

2) For 9.87 per cent, 8.41 per cent, and 8.09 per cent respondents Computer Software Application, Commercial Garment Design and Making and Horticulture gave the best chance for self-employment.

3) Majority of the students considered their courses as not having good chance for self employment.

5.6.5 Offering more vocational courses in more school

1) Majority of the students *i.e.*, 52.27 per cent perceived that offering vocational courses in more schools as needed to make the courses more popular among the people.

2) 42.07 per cent respondents also thought that offering vocational courses in more schools was needed as more students can be enrolled to study vocational courses.

5.6.6 For which group of students vocational course is best suitable

1) 48.06 per cent respondents perceived vocational course as most suitable for average performing students.

2) Out of all the respondents, 19.90 per cent students perceived vocational course as best suitable for poor performing students and 14.56 per cent as best suitable for good performing students.

5.6.7 Ways in which vocational education can be improved

1) Having more practical works and providing more infrastructural facilities were the two most important ways as majority of students (62.62% and 59.39%) perceive so.

2) Next important ways were: i) having more experienced teachers (as perceived by 42.88%); ii) improving the service conditions of vocational teachers (by 37.54%); iii) enhancing the professional skills of vocational teachers through training programs (by 34.47%) and iv) improving on the job training (by 28.96%).

3) Rest of the means mentioned by few students ranging from 4.85 per cent to 19.9 per cent were: i) revising the syllabus (by 19.9%); ii) increasing the size of the class (by 6.63%); introducing more vocational courses (5.34%) and reducing the size of the class (4.85%).

5.6.8 About State Government in playing its role

Majority of the students perceived the State Government as not having done what it was supposed to do with regard to vocational education in Mizoram. Students' perceptions on what the State Government should do in this regard were:

1) It should give more grants for the maintenance of the existing vocational courses (perceived by 56.47%)

2) It should provide more funds for vocational courses (perceived by 52.91%).

3) It should offer more courses in more schools (perceived by 50.48%).

4) It should give more importance to vocational education (perceived by 47.90%)

5.6.9 About SCERT in playing its role

1) Only 15.70 per cent of the students thought that SCERT had done what it was supposed to do.

2) 60.52 per cent of students perceived that SCERT should visit schools to have career awareness more often. 47.25 per cent of the respondents perceived that SCERT should organize training for vocational teachers more regularly.

5.7 Findings and Conclusions Related to Perception of Teachers about the Prospects of Vocational Education

Major findings related to teachers' perception on vocational courses at higher secondary stage of education in Mizoram were as follows:

5.7.1 Perception about introducing more vocational courses at higher secondary school in Mizoram

1) Health Care & Beauty Culture and Food Preserving & Processing (home science) were the courses that 45.45 per cent and 42.42 per cent respondents perceived as necessary for newly introduction.

2) Catering & Restaurant Management and Bakery & Confectionery were the courses suggested to be introduced by a high per cent of respondents i.e. 39.39 per cent and 36.36 per cent respectively. Marketing & Salesmanship (Business & Commerce), Lineman (Engineering Technology), Hospital Documentation (Health & Paramedical), Photography (Humanities and others) and Photography (Humanities & others) were suggested by 33.33 per cent respondents each. Steno-typing was also chosen by 30.30 per cent respondents for introduction in Mizoram.

3) Other courses like Dairying (Agriculture) and Floriculture were suggested for introduction by 21.21 per cent and 18.18 per cent respondents respectively and, Vegetable Seed Production and Clock & Watch Technology by 15.15 per cent each.

5.7.2 Perception about offering more vocational courses in their school

1) 36.36 per cent teachers wanted to introduce more vocational courses in their school.

2) Majority of the teachers did not perceive the need of introducing some more vocational courses in the schools.

5.7.3 Vocational courses having prospects for better job placement in Mizoram

1) Medical Laboratory Technician was perceived by 24.24 per cent respondents to be the best. Computer Technique, Automobile Engineering Technology and Office Secretaryship occupied the second place as each 15.15 per cent respondents perceived them as having prospect for job placement in Mizoram.

2) Vocational teachers perceived the existing vocational courses as not having good prospects for better job placement in Mizoram.

5.7.4 Vocational courses having prospects for better job placement outside Mizoram

1) 33.33 per cent perceived that Computer Technique had the best prospect followed by Commercial Garment Design and Making as perceived by 12.12 per cent respondents. Computer Software Application had the best chance for 6.06 per cent. For 9.09 per cent respondents Automobile Engineering Technology had the best chance and for each 3.03 per cent Medical Laboratory Technician, Horticulture, Sericulture and Office Secretaryship had the best chance for employment outside Mizoram.

2) As the percentages of teachers perceiving the existing vocational courses as having prospects for better job placement outside Mizoram were all very small, it can be interpreted that vocational courses offered at higher secondary level in Mizoram do not have prospect for job placement outside Mizoram.

5.7.5 Vocational courses which gave better chance for self-employment

1) Commercial Garment Design and Making gives a best chance for self employment based on perception of 27.27 per cent respondents. Automobile Engineering Technology occupied second place in the perception of teachers as giving a good chance for self employment.

2) Computer Technique, Sericulture, Horticulture and Medical Laboratory Technician occupied the third, fourth, fifth and sixth place as 18.18 per cent, 15.15 per cent, 12.12 per cent, and 9.09 per cent respondents respectively mention them. For 6.06 per cent each, Computer Software Application and Office Secretaryship gave a better chance for self employment.

5.7.6 About offering more vocational courses in more school

1) Offering vocational courses in more schools was needed mainly to popularise the courses among people as this perception was held by 54.55 per cent of the teachers.

2) Teachers of Computer Technique constituted the largest percentage for the response whereas teachers of Automobile Engineering Technology did not give such response meaning that they perceived offering vocational courses in more schools as not needed.

5.7.7 Ways in which vocational courses introduced in Mizoram can be improved as perceived by majority of the teachers were

1) By improving the service conditions of vocational teachers perceived by 69.70 per cent teachers.

2) By providing more infrastructural facilities perceived by 66.67 per cent teachers.

3) By updating and improving the curriculum perceived by 51.51 per cent teachers, and

4) By improving on the job training perceived by 51.51 per cent teachers.

5.7.8 For which group of students vocational course was suitable

Majority of the teachers (72.78%) perceived vocational course as suitable for average performing students whereas only 15.15 per cent of teachers perceived it as suitable for poor performing students. There were 45.45 per cent teachers who held the view that the courses were suitable for good performing students.

5.7.9 Teachers of vocational courses perceived training as very important for improvement of teaching as responses of as many as 90.91 per cent teachers said so.

5.7.10 57.57 per cent teachers perceived the present evaluation system as suitable to assess the ability of the students.

5.7.11 63.64 per cent teachers perceived on-the-job training as helping the students in finding job.

5.7.12 About State Government in playing its role:

1) No vocational course teacher perceived Government of Mizoram as having done what it supposed to do. As many as 84.84 per cent teachers felt that the Government should give more importance to vocational education and 78.79 per cent wanted the Government to provide more funds for the courses.

2) A small percentage of teachers (30.30%) also perceived that the government should offer more courses in more schools and give more funds for the courses.

5.7.13 About SCERT in playing its role:

1) The only teachers who perceived SCERT as having done what it were required to do were teachers of Office Secretaryship while all other teachers did not perceive so.

2) On the perception about what SCERT should do, 60.61 per cent teachers perceived that it should visit schools to have career awareness more often and 57.57 per cent teachers wanted it to organize training for vocational teachers more frequently.

5.8 Findings and Conclusions Related to Perceptions of Parents about the prospects of Vocational Education

Major findings related to perception of parents on vocational education at higher secondary stage of education in Mizoram were as follow:

5.8.1 Perception of Parents about introducing more vocational courses in higher secondary school

In addition to the present available courses, 56.82 per cent felt the need of introducing some more vocational courses at higher secondary stage of education in Mizoram. The following courses were suggested for introduction:

1) Vegetable Seed Production by 11.36 per cent of parents.

2) Dairying (Agriculture) by 9.09 per cent, Marketing & Salesmanship (business & commerce), Food preserving & Processing (home science) and Bakery and Confectionary by 9.09 per cent each, Floriculture by 4.55 per cent.

3) Photography (humanities and others) and Health care and Beauty Culture by 2.77 per cent each.

5.8.2 43.18 per cents parents perceived the vocational courses offered in Mizoram Higher secondary schools as sufficient.

5.8.3 Vocational courses having better prospects for job placement in Mizoram:

1) Low percentages of parents perceived the existing vocational courses as having prospects for better job placement in Mizoram.

2) Computer Technique received the highest response indicating that it was considered to be having better job placement in the state.

5.8.4 Vocational courses having better prospects for job placement outside Mizoram

1) Low percentage of parents ranging from 4.55 to 36.36 per cent only perceived the courses as having prospect for job placement.

2) Parents perceived the courses in which their children were enrolled as having better prospect for job placement outside the state.

5.8.5 Vocational courses having prospects for better chance of self-employment

1) The highest percentage of response (31.82) was received by Computer Technique.

2) The percentages of responses received by other vocational courses were so low that they range from 6.82 to 13.64 per cent.

3) Parents from all the vocational courses except Office Secretaryship perceived the courses pursued by their children as giving better chance for self employment.

5.8.6 About offering vocational courses in more schools

Majority of parents (65.91%) felt the need of offering vocational courses in more schools as these would be more opportunities for students in different areas to study vocational courses.

5.8.7 For which group of students vocational courses was best suitable for

Vocational course was most suitable for average performing students as 84.09 per cent of parents perceived so. Good performing students by 13.64 per cent and for poor performing students by 2.27 per cent of parents.

5.8.8 Ways in which vocational courses can be improved as perceived by parents

1) Majority of parents (68.18%) were in favour of providing more infrastructural facilities.

2) Other ways suggested such as improving the service conditions of vocational teachers, improving on-the-job training, having more experienced teachers, introducing more courses and by enhancing the professional skills of vocational teachers through training programs were not that relevant as percentages of parents suggesting them was low ranging from 2.27 to 18.18 per cent.

5.8.9 About State Government in playing its role

1) 34.09 per cent of parents perceived the Government of Mizoram as having done what it was supposed to do.

2) Only 15.91 per cent parents were of the view that it should give more importance to vocational education,

3) 6.82 per cent perceived that it should provide more funds for vocational courses,

4) 4.55 per cent perceived that it should offer more courses in more schools and it should give more grants for the maintenance of the existing vocational courses.

5.8.10 Majority of the parents i.e. 68.18 per cent were satisfied with the vocational course pursued by their sons/daughters

5.8.11 More than half of the parents (59.09%) perceived the vocational courses pursued by their children as giving better opportunity for employment than the general course

5.8.12 As perceived by 63.64 per cent parents, opportunity for further studies was limited for students pursuing vocational courses

5.8.13 Majority of parents (68.18%) wanted their daughters/sons to pursue higher education in vocational course than in general educations

5.9 Discussion of Findings

The present study found that vocational courses were offered in district capital only and majority of the higher secondary schools that offered vocational courses were in the State Capital. Advant (1985) also concluded his study that the number of institutions which introduced vocational education was in Aurangabad district. CASE (1985) also reported that vocational courses were introduced mostly in urban area.

In the present study, the students were admitted in the vocational education stream without any test. This has the support of Soundaravalli (1984) who found that in the State of Tamil Nadu no aptitude tests were given to students seeking admission in vocational courses. Biswal (1992) in his study of vocationalisation of education in the State of Himachal Pradesh found that admission to vocational courses was done on the basis of merit.

The enrollment of students went on decreasing from 2014-2016 in the present study of Biswal (1992) reported an increasing trend of enrollment in the vocational stream from 1988-89 to 1990-91 in the State of Himachal Pradesh. The proportionate share of vocational students' enrollment at the higher secondary stage was only 4.8% across five zones of the country according to the study report of Operation Research Group (1996).

The present study reveals that the physical and infrastructural facilities of the vocational education were insufficient. These findings has the support of Reddy (1984), Soundaravalli (1984), Thongplee (1985), Balasankar (1988), Singh (1988), Vaid (1990), Verma (1990), Bahatnagar Dhote (1991), Biswal (1992), Swain (1992), Thimmaiah (1982), Baraga (1991) and Joshi (1992).

The study highlights different problems related to practical work like small practical room, irregular power supply, insufficient furniture, insufficient space. Similar findings have also been reported by Gokhale (1984), Pillai and Srinivasan (1990) and ORC 1996 in their respective studies. CASE (1985) also found that practical experience could not be provided to the students appropriately because of lack of funds, lack of transportation and lack of cooperation from teachers.

The present finding reveals that there was insufficient number of specialised teachers for vocational teachers. Reddy (1984) reported the non availability of specialized teachers. Advent (1985) also found that enough teachers were not available for vocational teachers.

The present study highlights the problems relating to textbooks such as contents of the textbooks, unavailability of textbooks for all the subjects. Bhatnagar (1991) and Biswal (1992) also found problems relating to textbooks in their studies.

The present study reveals that the service conditions of the vocational teachers were not good. Similar findings have also been reported by Gokhale (1984) in his study. CASE's (1985) findings revealed that most of the teachers had essential qualifications however, because of lack of job security and low salary; highly qualified and experienced teachers could not be attracted. Vaid's (1990) study also found that because of the low remuneration it was difficult to get the right type of teachers.

In the present study, the vocational teachers mentioned that their teaching would be improved if they attend more training. Similar findings have also been reported by Operation Research Committee (1996), Mowji (1983), Baraga (1991) and Swain (1992). Advant (1985) in his findings also concluded the need of orientation for teachers teaching vocational subject. Biswal (1992) reported that there was no special arrangement to train vocational teachers in the State of Himachal Pradesh.

The present study revealed that most of the vocational teachers faced problems relating to salary. Mowji (1983) found that vocational course teachers were dissatisfied due to low salary. CASE (1984) also reported that due to low salary qualified teachers were not attracted.

The findings of the present study in relation to the problems of job placement have the support of Mohanty (1986), Singh (1988), Dhote (1991), Joshi (1992), Almegren (1997). Gokhale (1984) found that the Government was not providing any job to the students passing out with vocational courses. Gupta *et. al.* (1991) who reported that there was lack of efforts in getting all the courses recognised by employment agencies. Gupta & Kumar (1990) also reported that selection of

vocational courses were not based on district vocational survey findings, resulting in a mismatch between the courses introduced and availability of job opportunities.

The present study gives a real picture of the status of vocational education at higher secondary stage of education in Mizoram. An important educational programme which has been started in a State for more than two decades deserves a deep study about its implementation. It also highlights the problems of students and teachers of the vocational courses at higher secondary stage of education in Mizoram. Identifying the different problems faced by the teachers and students can help the Government to take certain necessary measures for the improvement of the vocational education. Perceptions of students, teachers and parents about the prospects of vocational education also clearly reveal the prospect of vocational education at the higher secondary stage of education in the State. This will inform and help the responsible body to make appropriate policies and measures for improvement of vocational education in Mizoram in particular and in the country in general.

5.10 Implications of the Study

The present study has certain implications. They are listed as under:

1) The number of researches conducted in the area of vocational education during the period of 1990 to 2000 was 64. The number went down to 8 for the period 2001 to 2018 which implies the lack of interest among the researchers in the field of vocational education.

2) The number of schools offering vocational courses went on decreasing from 27 schools to 14 schools between 2007 and 2014 which implies the downsizing of vocational education.

3) Vocational courses were opened only at district capitals which imply the poor chances for the rural and village students to study vocational courses.

4) The study threw light that vocational education was not popular as only 3.44 per cent of all the higher secondary students pursued vocational courses.

5) No new courses were introduced after 2010 which shows that attention was not given to these courses by the responsible body.

6) The student's enrollment went on decreasing which implies the output of vocational courses was not satisfactory among the people.

7) Electricity was available and regular only for 57.14 per cent schools which indicate the problems for doing practical work.

8) Time allotted for practical was in accordance with the specification by only two courses out of eight courses. This implies the need of time table revision for other courses.

9) Hometown of the students highlights that most of the beneficiaries of vocational courses were from Aizawl district.

10) Findings of the present study imply that good students with good academic records do not go for vocational education. In other words, vocational courses were pursued by students with poorer academic records and whose parents were self employed.

11) The present study found that teachers training helped the teachers in their teaching which implies the need of conducting more teachers training.

12) Facilities need to be increased or improved for every course.

13) The responsible body needs to develop good textbooks.

14) Students worrying about college admission and further studies implies that the highest percentage of students have no plan for work after leaving school.

15) Too heavy workload of teachers indicates the shortage of teachers in number.

16) Irregular payment of teachers' salary highlights that the service conditions of the teachers were being neglected.

17) The findings that almost all the vocational course teachers were appointed on contractual basis and that vocational courses were pursued mostly by students with poor academic background imply the importance of having permanent and regular teachers to make vocational education in the state more successful.

5.11 Recommendations for the Improvement of Vocational Education in Mizoram

From the findings of the study, the following recommendations are made for the improvement of vocational education at higher secondary stage of education in Mizoram:

1) As many students of vocational courses are worried about job placement, concerned authority at the state level should take care of this by having a tie-up with potential employers.

2) The State Government should appoint a Committee or entrust some government officials to take care of the needs of students of vocational courses such as college admission and further studies for those who want to continue their studies, and job placement and self-employment for those who want to earn a living.

3) Producing employable school graduates should be the focus of the programme. For this, internship and on the job training should be taken seriously and carried out in an effective manner.

4) Concerned authorities should take the necessary actions for solving the problems related to facilities such as insufficient equipment, insufficient furniture, congested classrooms and irregular power supply which hamper the effective functioning of vocational education in the state.

5) Attention should be given to the problems regarding conduct of practical works such as congested practical rooms/ laboratories/ workshop, insufficient number of practical classes conducts and lack of required space, and remedial measures should be taken for these.

6) SCERT, Mizoram should give more importance to capacity building of teachers of various vocational subjects. More relevant training courses with Resource Persons having the relevant expertise should be organised more regularly. Attendance of all the teachers in this kind of training should be ensured.

7) SCERT should provide career awareness programme and career guidance to students of vocational courses. The concerned higher secondary schools can also make internal arrangement on their part by inviting experts in the courses offered.

8) Adequate number of regular teachers needs to be appointed to effectively carry out the programmes of vocational education. Regularity and efficiency of the teachers should be ensured.

9) More time needs to be allotted for practical classes to address the complaint of the students in this regard. At the same time, practical classes should be conducted in an efficient manner so as to develop the required skills for different courses or trades.

10) Teachers of vocational courses should be motivated by improving their service condition and by giving them the salary deserved by them and that also regularly.

11) The required number of teachers should be appointed to run the courses effectively. At the same time, only teachers with the essential qualifications should be appointed for each course.

12) To make the teachers more efficient, the equipment and facilities required by them should be made available to them.

13) There should be proper linkage of institutions offering vocational courses and on-the-job training centre.

14) While selecting the centres for on-the-job training, it should be ensured that the selected centres are equipped with the required facilities.

15) Some more courses which have the prospect of giving employment or self-employment need to be introduced in higher secondary schools in Mizoram. Courses like Photography, Health Care & Beauty Culture, Food Preserving & Processing, Catering & Restaurant Management, Bakery & Confectionery are recommended for this.

16) More funds should be allocated for the maintenance of infrastructural facilities and equipments.

17) Steps should be taken to increase the enrollment of students. Admission should be notified through various means to make the vocational courses popular.

18) More practical classes should be conducted in every school.

19) Teachers should be approachable for the students to solve their problems.

20) Class should be taken more regularly.

21) Different methods of teaching should be adopted by the teachers to make their teaching more effective for the learners.

22) Prior preparation is a must for teachers to have effective teaching.

5.11 Suggestion for Further Studies:

1) Comparative study of vocational education in Mizoram and other states of the country will bring a clear picture of the status of vocational education in Mizoram.

2) A specified study of the achievements and placements of pass out students could be taken as an independent research to find out the relevance of vocational education for employment.

3) Comparative study of vocational education and vocational training to find out the significance of vocational education in Mizoram.

4) A confined study of the vocational education in Mizoram with respect to infrastructures and facilities of the schools for further improvement of vocational education will be beneficial.

BIBLIOGRAPHY

Abramson, T., Tittle, C.K., Cohen, L. (1949). Handbook of vocational education evaluation. London, Sage Publication.

Advant, S.B. (1985). An evaluation of vocational courses introduced at the +2 level in Marathwada- A case study. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Aggarwal, J.C. & Aggarwal, S.P. (1992). *Educational planning in India: With a slant to educational financing & administrations*. New Delhi: Concept Publishing Company. pp. 28-3.

Agrawal, T. (2012). Vocational education and training in India; challenges, status and labour market outcomes. *Journal of Vocational Education and Training:* Vol. 64(4).Retrieved from https://www.tandfonline.com/doi/abs/10.1080/1363 6820. 2012.7257851.

Agrawal, T., & Agrawal, A. (2017). Vocational education and training in India: a labour perspective. *Journal of Vocational Education and Training:* Vol. 69 (2). Retrieved from https://www.tandfonline.com/doi/abs/10.1080/13636820. 2017.1303785.

Alias, S. (2012). Will skills save us? Rethinking the relationships between vocational education, skills development policies, and social policy in South Africa. *International Journal of Educational Development.* Retrieved fromhttp://www.heart-resources.org/wp-content/uploads/2015/08/11.

Almegren (1997). Private sector perception of the vocational educations item in the city of Riyadh. Saudi Arabia. *Dissertation Abstracts International* Vol. 57 (11). Order Number DA971447.

Alonzo, V.S. (2011).An analysis of career and technology education programs in Texas ESC region one high schools. *Dissertation Abstracts International* Vol. 73(1). Order Number DA DA343009.

Arora, P.N. (1998). Educational and vocational aspirations of students of Class XII-preparation of an interview schedule: A pilot study. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Balasankar, P. (1988). A study of work experience programme in the schools of Kerala and formulating guidelines for strengthening the programmes. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Baraga, R. (1991). A study on the interest and difficulties faced by the students studying in vocational education stream. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Barclay, L.K. (1974). The emergence of vocational expectations in preschool children. *Journal of Vocational Behaviour* 1.

Beddia F.M. (2009). Austrialia and India: Facing the twenty-first century skills challenge. *ERIC Record Ed507341.*

Bergland, B.W. & Lundquist, G.W. (1975). The vocational exploration group and minority youth: An experimental outcomes study. *Journal of Vocational Behaviour* 3.

Bhargava, R. (1991). A study on the interest and difficulties faced by the students studying in the vocational education stream. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Bhatnagar, K.M. (1991). The role of industries in promotion of vocational education among rural women. A feasible study in the state of Haryana. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Biswal, P. (1992). Vocationalisation of education at the +2 stage in Himachal Pradesh: An evaluative study. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Biswas, I. (2008), Vocational education in India. *India Science and Technology.* Retrieved from https://papers.ssrn.com/sol3/papers.cfm? abstract_id=1473900.

Bordia, S. (2000). Funding problems of technical education in developing countries, in cross-roads of the new millennium. *Proceedings of the Technological Education and National Development Conference.* Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

Cairo, P.C. (1979). The validity of the Holland and basic interest scales of the strong vocational interest blank: Leisure activities versus occupational membership as criteria. *Journal of Vocational Behaviour* 1.

CASE (1985). A study of vocationalisation of education at the higher secondary stage, MSU. (Planning Commission financed) *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Chakroun, B. (2010). N*ational qualification frameworks: from policy borrowing to policy learning*. *ERIC Record EJ883129.*

Chaube, S.P. (2010). *Problems of Indian education.* Agra,Agrawal Publications. Pp233-235.

Choudhury, K. (1990). A study of the vocational aspirations of Standard IX students of English medium schools in Pune city. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

CommagerH.S. (2017). *School education system in India before and after independence.* Retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/69112/5/chapter%203.pdf

Conference of the State Education Secretaries (2012). *Vocational education in secondary education*. Retrieved from http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/Annexure-15%20%28SE%29%20%28VE%29.pdf.

Cox, Nancy Lynne (2011). Students' characteristics and self-concept of secondary career and technical education students in a north central Texas region. *Dissertation Abstracts International* Vol. 71 (8). Order Number DA3417741.

Desai, G. & Whiteside, T. (2000). Vocational higher secondary education graduates in the state of Gujarat. Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

Dhote, A.K. (1991). An on-the-spot study of the implementation of the vocationalisation of education programme in the state of Maharashtra. *Fifth Survey of Educational Research 1988-1992*, Vol. II, New Delhi: NCERT.

Edufocus (2017). *The Secondary Education Commission 1952*. Retrieved from https://edufocus.blogspot.in/2017/04/the-secondary-education-commission.html.

Emmanuel, M.A.K.L (1990). Vocationalisation of the +2 stage- A study of some major problems of vocationalisation of education in Andhra Pradesh. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Evaluation of implementation of the vocational education programme in the state of Punjab- A report(n.d.). Bhopal, PSS Central Institute of Vocational Education. NCERT.

Fabry, J.J (1976). An investigation of Holland's vocational theory across and within selected occupational groups. *Journal of Vocational Behaviour* 1.

Four Authors. (1984). *History of Indian education and its contemporary problems with special reference to national development.* Delhi:Doaba House.

Gokhale, H.V. (1984). A Study of vocationalisation at +2 Stage (Commerce Stream). *Fourth Survey of Research in Education. 1983-1988,* Vol. II, New Delhi: NCERT.

Gokhale, H.V. (1985). A study of vocationalization of education at +2 and +3 stages in Commerce Stream (Maharashtra State). *Fourth Survey of Research in Education. 1983-1988,* Vol. II, New Delhi: NCERT.

Government of India, MHRD. (1998). *National Policy on Education (Modified 1992)*. Retrieved from http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/NPE86-mod92.pdf.

Government of India, MHRD (2014). G*uidelines for vocationalisation of secondary and higher secondary education*. Retrieved from http://rmsaindia.gov.in/ images/Vocationalisation.pdf.

Government of India, Planning Commission (1984). *The approach to the seventh five year plan.* Retrieved from http://planningcommission.nic.in/reports/publications/approch_seventh_five.pdf.

Government of India. (2014). *Revision of the scheme of vocationalisation of higher secondary education.* New Delhi: Ministry of Human Resource Development. Department of School Education & Literacy. Retrieved from http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/REVISED-SCHEME-VHSE.pdf.

Government of Mizoram, Directorate of School Education. *Economic Survey Report 2016-17*. Retrieved from https://schooleducation.mizoram.gov.in/page/Economic-survey-report-2016-17.

Gupta, S.M. &Dhote, A.K. (1990) A quick appraisal of the implementation of the centrally sponsored scheme on vocationalisation of secondary education. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Gupta, S.M. &Raizada, P. (1991). On-the-spot study of the implementation of vocationalisation of education programme in the state of Karnataka. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Historical development of technical education in India. Retrieved from http://shodhganga.inflibnet.ac.in/bitstream/10603/7053/7/07_chapter%202.pdf

.

Hummel, E.W. (1990). The role of secondary vocational education in the economic development of the building trades industry of Clinton Country. *Dissertation Abstracts International.* 51 (5). Order Number DA9032301.

Intodia S.L. (1993). Vocational needs of tribal children of Rajasthan. *Sixth Survey of Educational Research* 1993-2000, Vol. I, New Delhi: NCERT.

Izraeli, D., Krausz, M., & Garber, R. (1979). Student Self-selection for Specialization in Engineering. *Journal of Vocational Behaviour* 15.

Jepsen, D.A. (1974). Vocational decision-making patterns among noncollege-aspiring adolescent. *Journal of Vocational Behaviour*4 (3).

Jepsen, D.A. (1975). Occupational decision development over the high school years. *Journal of Vocational Behaviour*7 (2).

Joshi, L.N. (1992). Vocational achievements and problems faced by students who had passed the +2 vocational education examination. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Kaur, D. (1990). Educational and vocational aspirations of students belonging to different socio-economic locales of Jammu division. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Kaushik. K. (2014). Vocational education in India. *International Journal of Education and Information Studies* 4 (1), pp. 55-58. Retrieved from https://www.ripublication.com/ijeisv1n1/ijeisv4n1_12.pdf.

Kelso, G.I. (1975). The influences of stage of leaving school on vocational maturity and realism of vocational choice. *Journal of Vocational Behaviour*7 (1).

Khanale, P. &Vaingankar, A., (2006). Estimating availability of middle level skilled manpower. *The Turkish Online Journal of Educational Technology* – TOJET, Vol. 5(2): 4. Retrieved from https://files.eric.ed.gov/fulltext/ED501454.pdf.

KKHSOU (n.d.). *Introduction to the Sargent report on education, 1944*. Retrieved from http://www.kkhsou.in/main/education/sargent_report.html.

Leclereq, J.M. (1994). General education and vocational training at the post compulsory level in Europe: The end of Mutual Disregard? Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

Lunneborg, P.W. (1975). Interest differentiation in high school and vocational indecision in college. *Journal of Vocational Behaviour*7 (3).

Maheshwari. V.K., (2012a). Education in Buddhist period in India. Retrieved from Rhttp://www.vkmaheshwari.com/WP/?p=522.

Maheshwari. V.K., (2012b). Education during medieval period in India. Retrieved from http://www.vkmaheshwari.com/WP/?p=512.

Martin, S.J. (2010). Instructional alignment of workplace readiness skills in career and technical education, Martin, Sarah Jane. *Dissertation Abstracts International* Vol. 71(2). Order Number DA3393004.

Mc Connell, E.L. (1997). An exploratory study of secondary student's career goals in regard to postsecondary education. *Dissertation Abstracts International* Vol. 57(11). Order Number DA9711709.

Mehroo D.B. *A work book on vocational exploration. A work-experience project for standard VIII*. Bombay, Deepak Prakashan Educational Publishers.

Mohankumar,V. (2008). The need for vocational education: Changing economic and labour market scenario. *Indian Journal of Adult Education.* 69 (3).

Mohanty, G. (1986). A survey of vocational education in the state of Orissa since Independence (1974-1981). *Fourth survey of research in education 1983-1988,* Vol. II, New Delhi: NCERT.

Mohanty, J. (2003). *Current trends in higher education.* New Delhi: Deep and Deep Publications Pvt. Ltd. Pp. 299-305.

Mowji, M.N. (1983). An investigation into the educational and vocational problem of higher secondary students of Greater Bombay (1975-1977) English medium. *Fourth Survey of Educational Research 1983-88,* Vol. I, New Delhi: NCERT.

Operation Research Group (1996). Evaluation of the scheme of vocationalisation of secondary education. Independent Study conducted for MHRD, New Delhi. *Sixth Survey of Educational Research.1993-2000,* New Delhi: NCERT.

Osipow, S.H. (1976). Vocational behaviour and career development, 1975: A review. *Journal of Vocational Behaviour*9 (2).

Osipow, S.H., Carney, C.G., & Barak. (1976). A scale of educational-vocational undecidedness: A typological approach. *Journal of Vocational Behaviour* 9 (2).

Palanive, A., Peter, U., & Richard, M., (2006). A comparison of business graduates' labour force destinations following post-secondary vocational education and training in three Indian states (*i.e.*, Kerala, Goa and Haryana). *ERIC Record EJ769116.*

Palanivel, A. (n.d). Status of vocational pass outs of business and commerce based vocational courses in India. A research report. New Delhi: Central Institute of Vocational Education, NCERT. pp. 1-4.

Pillai, S.S. and Srinivasan, R. (1990). A survey of problem of technical students. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Pilz, M. (n.d). India: Preparation for the world of work: education system and school to work transition. Springer. p190. Retrieved from https://books.google.co.in.

Pilz, M., Krisanthan, B., Michalik, B., Zenner, L., & Li, J., (2016). Learning for life and/or work: The status quo of pre-vocational education in India, China, Germany and the USA. *Research in Comparative and International Education*. Vol. II (2). Retrieved from http://journals. sagepub.com/ doi/10.1177/1745499916637173.

Psacharopouls, G. (1997). Vocational education and training today: Challenges and responses. Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

PSSCIVE, (1999). Vocationalisation of education: Perspectives for the new millennium – The challenge. *Independent study. Bhopal, PSSCIVE*. Sixth Survey of Educational Research.1993-2000, New Delhi: NCERT.

Rao, V. (1999). *Trends in education.* Rajat Publication. Delhi.

Reddy, V.R. (1984). Survey of existing vocationalisation of school education in Andhra Pradesh. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Robert, M.J. (2008). School to career transitions: Career awareness and CTE students. *Dissertation Abstracts International* Vol. 69 (5). Order Number DA3313465.

Sachet. A. K. (2007). Vocational Education. *Sixth Survey of Research in Education 1993-2000,* Vol. 2, New Delhi: NCERT. Pp 129, 130.

Sacheti, A.K., Raizada, P. &Verma, A.P. (1992). On-the-spot study of the implementation of the vocationalisation of education programme in the state of Kerela. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Saini, K.S. (1980). *Development of education in India socio-economic and political perspectives.* New Delhi:Cosmo publications. Pp. 109-116.

Sangkima (2004). *Essays on the history of the Mizos.* Delhi, Spectrum Publications.

Sharma, A.N. (1987). Effectiveness of vocational exploration programme at secondary school level for vocationalisation of education. *Fifth Survey of Educational Research 1988-92,* Vol. I, New Delhi: NCERT.

Sharma, K. (2003). *Foundations of sociology in education*. Kanishka Publishers. New Delhi.

Sharma, R. (2004). *Vocationalization of education: Facilitators and distractors.* New Delhi:Northern Book Centre. p 4.

Sharma, R.N. & Sharma, R.K. (2006). *Problems of education in India*:New Delhi: Atlantic Publishers & Distributors. pp. 213-220.

Sharma, S.R. (1994). *Vocational education and training: History, methodology, issues and perspective.* New Delhi, Mital Publications. p 208. Retrieved from https://books.google.co.in.

Shodhganga (n.d). History of vocational education in India. Retrieved from http:// shodhganga.inflibnet.ac.in/bitstream/10603/142585/11/11_chapter%204.pdf.

Simeoni, G.N. (2007). Apprenticeship training and co-operative education in British Columbia. *Dissertation Abstracts International* Vol. 68 (6).

Singh, C. (1988). An evaluative study of vocationalisation of education in Indian schools. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Soundaravalli, S. (1984). A critical study of the functioning of the vocational education stream in higher secondary school in Tamil Nadu. *Fourth survey of research in education, 1983-1988,* Vol. II, New Delhi: NCERT.

State Council of Educational Research & Training, Mizoram. (2007). *Annual report 2006-2007.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2008). *Annual report 2007-2008.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2009). *Annual report 2008-2009.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2010). *Annual report 2009-2010.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2011). *Annual report 2010 -2011.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2012). *Annual report 2011-2012.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2013). *Annual report 2012-2013.* Aizawl: Author.

State Council of Educational Research & Training, Mizoram. (2014). *Annual report 2013 -2014.* Aizawl: Author

State Council of Educational Research & Training, Mizoram. (2015). *Annual report 2014-2015.* Aizawl: Author.

Subramanian, P. (1990). Socio-economic status of students of polytechnics and their attitude towards manual jobs. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Sudararajan, S., Williams and Sarah S.K. (1993). Teachers' attitude towards vocational education in the higher secondary schools in Tamil Nadu. *Experience in Education,* Vol. 21 (11), 277-290.

Sungoh, S.M. (1991). A study of vocational education and attitude towards vocationalisation of education in East Khasi Hills. *Fifth Survey of Educational Research 1988-92,* New Delhi: NCERT.

Swain, B.C. (1992). Socially useful productive programme at the secondary stage in Himachal Pradesh: An evaluative study. *Fifth Survey of Educational Research 1988-1992,* Vol. II, New Delhi: NCERT.

Swain, S.K. (1998). *Trends and Issues in Indian Education.* Delhi: Kalyani Publishers. *Pp. 2.4-2.5,*

Taneja, V.R. (1979). Educational thoughts and practice. New Delhi, Sterling Publisher, Pvt. Ltd.

Thimmaiah, G., Aziz A., Seetharamu, A.S., &Rayappa, P.H. (1982). *Vocational education : Problems and prospects (A case study of Karnataka).* Bombay : Himalaya Publishing House.

Thongplee, C. (1985). A study of non-formal vocational education programme in the region 5 of Thailand. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Thrasia, E.C. (1983). A Comparative study of the National School System of the USA, UK and India with a view to suggest Measures in promoting a Better Pattern of Vocation Based Common System of Public Education to suit the Needs and Aspiration of Indian Society. *Fourth Survey of Research in Education 1983-1988,* Vol. II, New Delhi: NCERT.

Tilak, J.B.G (1988). Vocational education in south Asia: Problems and prospects *International Review of Education.* 34 (2). Retrieved fromhttps://link. springer.com/article/10.1007/BF01874549.

Tome, E., &Goyal, A. (2015). Human capital, human resource development and vocational education and training: the case in India. *European Journal of Training and Development.* Vol. 39(7). Retrieved from https://www. emeraldinsight.com/doi/abs/10.1108/ EJTD-10-2014-0069.

Vaid, D.K, & Gupta S.M. (1990). A quick appraisal of the implementation of centrally sponsored scheme of vocationalisation of secondary education-Goa. *Fifth Survey of Educational Research 1988-92*, New Delhi: NCERT.

Vaid, K.V. (2007). *A study of linkage of school curriculum in the area of commerce with business and industry.* A research report. Department of Education in Social & Humanities. New Delhi: NCERT.

Verma, B. (1990). A quick appraisal of the implementation of the centrally sponsored scheme of vocationalisation of secondary education - Delhi. *Fifth Survey of Educational Research 1988-92*, New Delhi: NCERT.

Vocational competencies based curriculum repair maintenance & rewinding of electrical motor (Revised July 1991). *Department of Vocationalization of Education.*New Delhi:NCERT.

Vocationalization for all concept and implementation (1991). Draft Report of the National Seminar on Work Experience, Trivandrum.

Vocationalization of education unit. *Study of vocational programmes at the post secondary stage in Gujarat (January-February, 1979).* National Council of Educational Research & Training. New Delhi.

Walsh, W.B. &Hanle, N.A. (1975). Consistent occupational preferences, vocational maturity, and academic achievement. *Journal of Vocational Behaviour*7 (1).

Wilson, D.N. (1994). Comparative study of reforms in the post-secondary education and training of young adults. Sixth Survey of Educational Research 1993-2000, New Delhi: NCERT.

Appendix I

Observation Schedule cum Interview Schedule for Eliciting information from Higher Secondary Schools Offering Vocational Courses:

Basic Information:

1. Name of School :_____
2. Year of establishment :_____
3. Locality :_____
4. Town/ city :_____
5. District :_____
6. Type of school : a) Private unaided ( ) b) Adhoc ( )
   c) Deficit ( ) d) Government ( )
7. Board where the school is affiliated to: a)MBSE ( ) b) CBSE ( )
8. Vocational Courses offered

	Courses Offered	**a)Yes**	**b) No**	**Year of introduction**	**(Comments if necessary)**
A	Computer Technique				
B	Computer Software Application				
C	Computer Hardware Application				
D	Commercial Garment Design and Making				
E	Auto Mobile Engineering Technology				
F	Medical Laboratory Technician				
G	Horticulture				
H	Sericulture				
I	Office Secretary ship				

9. Fees for Courses the school is offering

Stream	Course/subject	Admission fees	Tuition fees	Practical fees	Exam fee
Science					
Arts					
Commerce					
Vocational course					

10. Type of school building:
    i. a) Pucca ( ) b) Semi Pucca ( ) c) Kutcha ( )
    ii. a) Government building ( ) b) Own Building ( )
    c) Rented Building ( )

11. Provision of water: a) sufficient ( ) b) Insufficient ( )

12. Provision of electricity: a) Available and regular ( )
    b) Available but irregular ( ) c) Not available ( )

13. School compound for doing practical works:
    a) Suitable ( ) b) Unsuitable ( )

14. Conditions of classrooms:
    a) Very good ( ) b) Good ( ) c) Average ( )
    d) Poor ( ) e) Very poor ( )

15. Furniture: i) Bench: a) Adequate ( ) b)Inadequate ( )
    ii) Desk: a) Adequate ( ) b) Inadequate ( )

16. i. Does your school notify to public about the Vocational Courses that it offers?
    a) Yes ( ) b)No ( )
    ii. If yes, by what means of communication?
    a) News paper / magazine ( ) b) Radio ( )
    c) Television ( ) d) School notice board ( )

17. What criteria are followed for admission in the school?

a) Performance of students in qualifying exam ( )

b) Admission test ( )

c) Interview ( )

d) Any other: _____

18. Students' Enrollment

Students Enrollment					
Year	**Class**	**General**	**Vocational course-1**	**Vocational course-2**	**Vocational course-3**
			No. of selected candidates	**No. of selected candidates**	**No. of selected candidates**
2014	Cl XI				
	Cl XII				
2015	Cl XI				
	Cl XII				
2016	Cl XI				
	Cl XII				

19. No. of theory & practical classes

Courses	**No. of theory classes and hrs in a day**		**No. of theory classes and hrs in a week**		**No. of practical classes and hrs in a day**		**No. of practical classes and hrs in a week**	
1								
2								
3								

20. What methods does your school adopt for imparting education/ skills?

S.No.	Methods of teaching	Vocational courses-1	Vocational courses–2	Vocational courses – 3
1	Lecture			
2	Practical			
3	Demonstration			
4	Project work			
5	Experiment			
6	Home assignment			
7	Any other			

21. What procedure does your school follow for evaluation of students?

S.No.	Procedures of evaluation	Vocational courses-1	Vocational courses-2	Vocational courses-3
1	Class test			
2	Weekly test			
3	Monthly test			
4	Internal test			
5	Assignment			
6	Seminar			
7	Project work			
8	Practical			
9	Annual exam			
10	Board exam			
11	Any other			

APPENDIX- II

Information Sheet cum Questionnaire For Students:

Information sheet

1. Name of school :_____
2. Class :_____
3. Subject/ course offered:_____
4. Home town/ village :_____
5. Present address :_____
6. Age :_____
7. Sex : a) Male ( ) b) Female ( )
8. Father's Occupation :_____
9. Father's Educational qualification: _____
10. Mother's Occupation :_____
11. Mother's Educational qualification: _____

12. Academic record

S.No.	Name of examination	Name of board	Year of passing	Division	Position/ distinction achieved, if any
	HSLC				

13. Educational background:

S. No.	Questions	Yes/No
1.	Did you repeat any class in primary school?	
2.	Did you repeat any class in middle school?	
3.	Did you repeat any class in high school?	
4.	Did you repeat any class in higher secondary school?	

14. What made you to decide to take vocational courses?
    a) Teachers ( ) b) Parents ( )
    c) Friends ( ) d) Self ( )

Problems Faced

1. What problems do you face regarding the vocational course that you are pursuing?
    a) Not interested in the course ( )
    b) The course is not of my first choice ( )
    c) Worried about college admission and further studies ( )

d) Worried about job placement ( )
e) Thinking of changing my subject into general (Arts, Science, Commerce) stream ( )
f) Any other: _____

2. Problems faced related to facilities:
   a) Irregular power supply ( )
   b) Congested classrooms ( )
   c) Insufficient equipments ( )
   d) Insufficient furniture for all the students ( )
   e) Any other: _____

3. What problems do you have with regards to practical work?
   a) Too congested practical rooms/ workshop/ laboratories ( )
   b) Lack of required space for doing practical work ( )
   d) Irregular supply of electricity ( )
   e) Any other: _____

4. What are the problems faced by you regarding textbook?
   a) Costly textbooks ( )
   b) Textbooks not available in time ( )
   c) Textbooks for all subjects not available ( )
   d) School cannot take steps for providing/purchasing textbooks ( )
   e) Textbooks not available in the local market ( )
   f) Textbooks need to be procured from outside Mizoram ( )
   g) Any other: _____

5. Are there problems with regard to contents of the textbooks?
   a) Contents do not help in developing my/our skills ( )
   b) Most of the contents are not related to the syllabus ( )
   c) Contents are difficult to understand ( )
   d) Unavailability of textbooks written in Mizo ( )
   e) Any other: _____

6. Problems faced related to teacher:
   a) Irregularity of teacher in taking class ( )
   b) Unfriendly attitude of teachers towards students ( )
   c) Any other

7. Problems faced related to on-the-job training:
   a) The training centre is not well equipped ( )
   b) The centre is too far from school ( )
   c) Any other _____

8. Problems faced regarding methods of teaching:
   a) The methods of teaching adopted by the teacher are not helpful/ effective ( )
   b) Difficult to understand the way the teacher teaches us ( )
   c) Theory class is not helpful to understand the concept ( )
   d) Practical class is not helpful to develop skills ( )
   e) Time allocated for theory class is not enough ( )
   f) Time allocated for practical class is not enough ( )
   g) Any other: _____

Perception about the prospects of vocational education in Higher Secondary School in Mizoram

1. Do you find the state of Mizoram needs to introduce more vocational courses at Higher Secondary Stage?
   (i)Yes ( ) (ii) No ( )
   If yes, what are those?
   a) Dairying (Agriculture) ( )
   b) Vegetable seed production ( )
   c) Floriculture ( )
   d) Marketing & salesmanship (business & commerce) ( )
   e) Steno- typist ( )
   f) Lineman (engineering & technology) ( )
   g) Clock and watch technology ( )
   h) Hospital documentation (health & paramedical) ( )
   i) Food preserving & processing (home science) ( )
   j) Bakery and confectionary ( )
   k) Catering and restaurant management ( )
   l) Photography (humanities and others) ( )
   m) Health care and beauty culture ( )
   n) Any other: _____

2. Which vocational courses have prospects for better job placement in Mizoram?
   _____
3. Which vocational courses have prospects for better job placement outside Mizoram?
   _____
4. Which vocational courses give better chance for self employment?
   _____
5. What is your perception about offering vocational courses in more schools?
   a) It is needed as more students can be enrolled to study vocational courses ( )

b) It is needed as there will be more opportunities for students in different areas to study vocational courses ( )
c) It is needed as vocational courses will become more popular among the people ( )
d) It is needed to meet the priority need of the local area/ people ( )
e) Any other:_____

6. For which group of students do you find vocational courses are suitable?
   a) For poor performing students ( )
   b) For average performing students ( )
   c) For good performing students ( )
   d) Any other : _____

7. In what way do you think that the vocational education can be improved?
   a. By providing more infrastructural facilities ( )
   b. By reducing the size of the class ( )
   c. By increasing the size of the class ( )
   d. By having more practical works ( )
   e. By revising the syllabus ( )
   f. By introducing more courses ( )
   g. By improving the service conditions of vocational teachers ( )
   h. By having more experienced teachers ( )
   i. By enhancing the professional skills of vocational teachers through training programs ( )
   j. By improving on the job training ( )
   k. Any other: _____

8. What is your perception about the State Government in playing its role in relation to vocational education at HSS level in Mizoram?
   a) It has done what it is supposed to do ( )
   b) It has not done what it is supposed to do ( )
   c) It should give more importance to vocational education ( )
   d) It should provide more funds for vocational courses ( )
   e) It should offer more courses in more schools ( )
   f) It should give more grants for the maintenance of the existing vocational courses ( )
   g) Any other: _____

9. What is your perception about SCERT in playing its role in relation to vocational education at HSS level in Mizoram?
   a) It has done what it is supposed to do ( )
   b) It has not done what it is supposed to do ( )
   c) It should visit schools to have career awareness more often ( )
   d) It should organize training for vocational teachers more regularly( )
   e) Any other: _____

APPENDIX III

Information Sheet Cum Questionnaire For Teachers:

Background

1. Name of school :_____
2. Home town/ village :_____
3. Present Address :_____
4. Age :_____
5. Sex : a) Male ( ) b)Female ( )
6. Educational and professional qualification with subjects / course:

   _____
7. Year of appointment :_____
8. Subject and papers taught :_____
9. Teaching experience before joining, if any :_____
10. Nature of appointment: a) Regular ( ) b)Contract ( )
    c)Temporary ( ) d) Part time ( ) e) Any other: ____

11. Academic record

Name of examination	Name of board	Year of passing	Division	Position/distinction achieved, if any
HSLC				
HSSLC				
Graduation				
Post Graduation				

12. Training undergone

	Name of course	Dates: from _____ to _____	Venue/place
1			
2			
3			

13. Have you attended any of the following? If yes, specify

S.No.		Name of the programme	Dates: from _____ to _____	Venue	Nature of participation	
					Paper presented	Attended without paper
1	Seminar					
2	Conference					
3	Symposium					
4	Conference					
5	Any other					

14. Publications, if any (specifying names of authors, year of publication, name of the article (if journal), name of journal/book, publisher, page no's (if journal, volume no. to be put before page no.)

_____

Problems faced

1. What problems are faced by you with regards to salary?

a) Salary is not at par with that of the general courses teachers( )
b) Irregular payment of salary ( )
c) Any other: _____

2. Do you face any problem due to insufficient number of vocational teachers in your school?

a) Workload is too heavy ( )
b) Have to teach the papers in which I am not confident ( )
c) Cannot attend any training ( )
d) Any other: _____

3. Problems related to facilities:

a) Electric wiring not in good condition ( )
b) Irregular power supply ( )
c) Congested classroom ( )

d) Insufficient furniture for all the students ( )

4. What problems do you have with regards to practical work?

a) Classrooms are too small for practical work ( )

b) There is no sufficient space for doing practical work ( )

c) Practical works cannot be done due to irregular supply of electricity( )

d) Insufficient furniture for all the students ( )

e) Any other_____

5. What are the problems that you face regarding equipment?

a) Equipments are not sufficient for all the students ( )

b) Qualities of the available equipments are not good ( )

c) The available equipments do not last long ( )

d) The required equipments are not available in time ( )

e) The available equipments need frequent replacement ( )

f) Replace the equipments with own expenses sometime ( )

g) The required equipments are not available in the local market ( )

h) The required equipments are not available in the State capital market ( )

i) Any other _____

6. Problems faced related to students

a) Students wanting to change their subject from vocational to general ( )

b) Students dropping out ( )

7. What problems do you face relating to study materials for teaching theory?

a) Textbooks not available in the local market ( )

b) Textbooks need to be procured from outside Mizoram ( )

c) Textbooks are too costly ( )

d) Textbooks do not cover the whole syllabus ( )

e) Any other: _____

8. Are there problems with regard to contents of the textbooks/ books?

a) Contents do not help in developing the skills of the learner ( )

b) Most of the contents are not related to the syllabus ( )

c) Contents are difficult to understand ( )

d) Unavailability of textbooks written in Mizo ( )

e) Any other _____ _____

9. What are the problems faced by you in transacting the skills?

a) Large size of the class creates problem in teaching theory ( )

b) The available teaching aids do not meet the requirements ( )

c) Irregular electricity in the classroom creates problems ( )

d) Weakness of students in English ( )

e) Any other_____

10. What problems do you face in relation to on-the-job training?

d) The training centre is not well equipped ( )

e) The centre is too far from school ( )

f) Any other _____

11. What problems have you faced with regards to job placement of students?

a) +2 level is not accepted/qualified in many jobs ( )

b) The students are too young to be employed in many jobs ( )

c) Job opportunities are very limited in Mizoram as the state is backward in industry ( )

d) Most passed out students are not mature and fit enough to seek jobs outside the state ( )

e) Any other: _____

Perception about the prospects of vocational education at Higher Secondary School in Mizoram

1. Do you find the state of Mizoram needs to introduce some more vocational courses in Higher Secondary School?

a) Yes ( ) b) No ( )

If yes, what are those?

a) Dairying (Agriculture) ( )

b) Vegetable seed production ( )

c) Floriculture ( )
d) Marketing & salesmanship (business & commerce) ( )
e) Steno- typist ( )
f) Lineman (engineering & technology) ( )
g) Clock and watch technology ( )
h) Hospital documentation (health & paramedical) ( )
i) Food preserving & processing (home science) ( )
j) Bakery and confectionary ( )
k) Catering and restaurant management ( )
l) Photography (humanities and others) ( )
m) Health care and beauty culture ( )
n) Any other _____

2. Do you find the need for introducing some more vocational courses in your school?
   (i)Yes ( ) (ii) No ( )
   If yes, which courses? _____
3. Which vocational courses have prospects for better job placement in Mizoram?
   _____
4. Which vocational courses have prospects for better job placement outside Mizoram?
   _____
5. Which vocational courses give better chance for self employment?_____
6. What is your perception about offering vocational courses in more schools?
   a) It is needed as more students can be enrolled to study vocational courses ( )
   b) It is needed as there will be more opportunities for students in different areas to study vocational courses ( )
   c) It is needed as vocational courses will become more popular among the people ( )
   d) It is needed to meet the priority need of the local area/ people ( )
   e) Any other: _____

7. In what ways do you think the vocational courses introduced in Mizoram HSS can be improved?
    a. By providing more infrastructural facilities ( )
    b. By reducing the size of the class ( )
    c. By increasing the size of the class ( )
    d. By having more practical work ( )
    e. By updating and improving the curriculum ( )
    f. By introducing more courses ( )
    g. By improving the service conditions of vocational teachers ( )
    h. By improving on the job training ( )
    i. By enhancing the professional skills of vocational teachers through training programs ( )
    j. Any others: _____
8. For which group of students do you recommend vocational courses?
    a) For poor performing students ( )
    b) For average performing students ( )
    c) For good performing students ( )
    d) Any other _____
9. Do you think your teaching would be improved if you attend more training?

a) Yes ( ) b)No ( )

10. Do you find the present system of evaluation suitable to assess the ability of the students?

a) Yes ( ) b) No ( )

11. Do you think that the on-the-job training helps the students in finding job?

a) Yes ( ) b)No ( )

12. What is your perception about the State Government in playing its role in relation to vocational education at Higher Secondary School level in Mizoram?
    a) It has done what it is supposed to do ,, ( )
    b) It has not done what it is supposed to do ( )
    c) It should give more importance to vocational education ( )
    d) It should provide more funds for vocational courses ( )
    e) It should offer more courses in more schools ( )

f) It should give more grants for the maintenance of the existing vocational courses ( )

g) Any other: _____

13. What is your perception about the State Government in playing its role in relation to vocational education at Higher Secondary School level in Mizoram?

a) It has done what it is supposed to do ( )

b) It has not done what it is supposed to do ( )

c) It should visit schools to have career awareness more often ( )

d) It should organize training for vocational teachers more regularly ( )

e) Any other: _____

APPENDIX IV

Interview schedule for parents:

Information sheet/ background

1. Name of son/ daughter : _____
2. School where son/daughter is admitted: _____
3. Address : _____

Perception:

1. Do you find the state of Mizoram needs to introduce some more vocational courses in HSS?

   (i)Yes ( ) (ii) No ( ) iii) No idea ( )

   If yes, what are they?

   a) Dairying (Agriculture) ( )
   b) Vegetable seed production ( )
   c) Floriculture ( )
   d) Marketing & salesmanship (business & commerce) ( )
   e) Steno- typist ( )
   f) Lineman (engineering & technology) ( )
   g) Clock and watch technology ( )
   h) Hospital documentation (health & paramedical) ( )
   i) Food preserving & processing (home science) ( )
   j) Bakery and confectionary ( )
   k) Catering and restaurant management ( )
   l) Photography (humanities and others) ( )
   m) Health care and beauty culture ( )
   n) Any other _____

2. Do you find the vocational courses offered in Mizoram Higher Secondary Stage sufficient?

   a) Yes ( ) b) No ( ) iii) No idea ( )

3. Which vocational courses have prospects for better job placement in Mizoram?

   _____

4. Which vocational courses have prospects for better job placement outside Mizoram?

   _____

5. Which vocational courses have prospects for better chance for self employment?

   _____

6. What is your perception about offering vocational courses in more schools?
   a) It is needed as more students can be enrolled to study vocational courses ( )
   b) It is needed as there will be more opportunities for students in different areas to study vocational courses ( )
   c) It is needed as vocational courses will become more popular among the people ( )
   d) It is needed to meet the priority need of the local area/ people ( )
   e) Any other:_____

7. For which group of students do you find vocational courses are suitable?
   a) For poor performing students ( )
   b) For average performing students ( )
   c) For good performing students ( )
   d) Any other _____

8. In what way do you think that the vocational courses can be improved?
   a. By providing more infrastructural facilities ( )
   b. By revising the syllabus ( )
   c. By introducing more courses ( )
   d. By improving the service conditionings of vocational teachers ( )
   e. By having more experienced teachers ( )
   f. By improving on the job training ( )
   g. By enhancing the professional skills of vocational teachers through training programs ( )
   h. Any others: _____

9. What is your perception about the State Government in playing its role in relation to vocational education at HSS level in Mizoram?
    a) It has done what it is supposed to do ( )
    b) It has not done what it is supposed to do ( )
    c) It should give more importance to vocational education ( )
    d) It should provide more funds for vocational courses ( )
    e) It should offer more courses in more schools ( )
    f) It should give more grants for the maintenance of the existing vocational courses ( )
    g) Any other: _____

10. Are you satisfied with the vocational course being pursued by your son/ daughter?
    a) Yes ( ) b) No ( ) iii) No idea ( )

11. Do you think the vocational courses being pursued by your son/ daughter gives him/ her better opportunity for employment than the general course?
    a) Yes ( ) b) No ( ) iii) No idea ( )

12. Do you find opportunity for further studies is limited for students pursuing vocational courses?
    a) Yes ( ) b) No ( ) iii) No idea ( )

13. Do you think your daughter/ son should pursue higher education in vocational courses than general course?
    a) Yes ( ) b) No ( )

ABSTRACT

VOCATIONAL EDUCATION AT HIGHER SECONDARY STAGE OF EDUCATION IN MIZORAM: STATUS, PROBLEMS AND PROSPECTS

Thesis

Submitted in Part Fulfilment for the Degree of

Doctor of Philosophy in Education

By

J. LALHRIATPUII

DEPARTMENT OF EDUCATION

MIZORAM UNIVERSITY

AIZAWL, MIZORAM

JUNE, 2018

INTRODUCTION

1. Concept of Vocational Education

Vocational education refers to skilled learning and work experience. It has several differing concepts which mostly arise from the tradition. One concept is that it is a craft-oriented education or training where the learners learn with manual activities rather than intellectual activities. Those who are unable to profit from the traditional academic learning generally opt for this sort of industrial training. There is the concept that vocational education is education for productive purposes or socially useful productive work. Vocational education for productive work basically provides learning experience of a vocational nature, training learners to fit the requirement of a hierarchical work force. It imparts education with practical activities to prepare a person for a socially useful employment and a proficient worker. As the trainee directly develops expertise in a particular group of techniques it is also sometime referred to as technical education (Mohankumar, 2008).

2. Rationale of the Study

As per annual report 2013-2014 of SCERT, Mizoram, there are fourteen higher secondary schools in the state offering different vocational subjects such as horticulture, commercial garment design and making, automobile engineering technology, medical laboratory technician, computer software application, computer technique, computer hardware maintenance, and office secretaryship. In this regard, there are many questions that arise in the mind of the investigator, the answers of which could be obtained only through research. These questions are:

1) What is the present status of vocational education in the state?
2) Are the infrastructure and physical facilities adequate for running these courses?
3) Do the up-gradation and maintenance of these facilities draw the attention of the concerned department?
4) What is the admission procedure?
5) Are text books available in the local market or they have to be purchased from other states?
6) What methods of teaching are employed?
7) What are the procedures of evaluation and examination?

8) Do the courses offered have a good potential job placement?

The answers to these questions will reveal the status of vocational education in the state, which will enable the authority to do something for the improvement.

The vocational courses at higher secondary stage are to be regarded as a preparation of an increasingly large number of school leavers for different vocations in life.

1) Who are the beneficiaries?
2) What background do they come from?
3) What problems are being faced by them?

These are the vital questions to understand the students served by vocational courses offered in Higher Secondary Schools in Mizoram. As quality of education depends to a great extent on the quality of the teachers it is imperative that teachers of vocational courses are qualified and properly trained. Important questions in this regard are:

1) What educational qualifications and degrees do the teachers have?
2) Have they undergone training?
3) What experiences do they have?
4) What problems do they face?

Perceptions of parents, teachers and students about the courses offered, the implementation and other related issues are expected to help the investigator to come up with suggestions for a bright prospect of vocational education in the state.

1) What thus are their perceptions?
2) What suggestions do they have for improvement of vocational education in the state?

To get satisfactory answers to all these questions, an empirical study is required.

3. Statement of the Problem

To address the questions raised in the preceding section and also to fill the research gaps, the proposed research problem was formulated as below:

Vocational Education at Higher Secondary Stage of Education in Mizoram: Status, Problems and Prospects.

4. Objectives of the Study

1) To study the status of vocational education at the Higher Secondary stage of education in Mizoram with reference to:
   (a) Courses offered.
   (b) Admission procedure.
   (c) Infrastructural facilities
   (d) Methods of imparting the skills.
   (e) Procedure of evaluation.

2) To analyze the background of students offering vocational subjects in Higher Secondary Schools in Mizoram.

3) To analyze the background of teachers teaching vocational subjects in Higher Secondary Schools in Mizoram.

4) To find out the problems faced by students and teachers in vocational stream of Higher Secondary Schools in Mizoram.

5) To study the perceptions of parents, teachers, and students about the prospect of vocational education in Higher Secondary Schools in Mizoram.

6) To suggest measures for improvement of vocational education at Higher Secondary stage of education in Mizoram.

5. Operational Definitions of the Terms Used

1) ***Vocational Education*** : Vocational Education refers to Education designed to prepare skilled personnel at lower levels of qualification for one or a group of occupations, trades or jobs.

Vocational education at higher secondary level includes general education, practical training for the development of skills required by chosen occupation and related theory. The proportions of these components may vary considerably but the emphasis is on practical training.

2) ***Higher secondary school*** : It implies the stage of education that comprises of classes XI and XII.

3) ***Status*** : The term 'status' in the proposed study means the present position or existing condition.

4) ***Problem*** : Problem refers to a situation, person or thing that needs attention and needs to be dealt with or solved.

5) ***Prospects*** : The term 'prospects' means the possibilities that something better may happen in the future.

METHODOLOGY OF THE STUDY

The methodology adopted by the investigator in the present study is discussed and presented under the following heads:

1. Method of the Study
2. Population and Sample
3. Construction of Tools
4. Collection of Data
5. Tabulation of Data
6. Statistical Treatment of Data

1. Method of Study

A descriptive survey approach was used to collect data for the present study.

2. Population and Sample

Population of the present study has been discussed under the following heads:

1) Population and sample of higher secondary schools
2) Population and sample of vocational students
3) Population and sample of vocational teachers
4) Population and sample of parents

2.1 Population and sample of higher secondary schools

There were 14 Higher Secondary Schools in Mizoram where 8 vocational courses were offered. All these schools constituted population of the present study. As the number of higher secondary schools offering vocational courses was few, the question of sampling did not arise. Thus, all the 14 Higher Secondary Schools offering vocational subjects were covered in this study.

2.2 Population and sample of vocational students

The total number of 777 students enrolled in different vocational courses offered by Higher Secondary School in Mizoram during 2014-2015 constituted population of students for the present study. Sample selection was not done as the number of students enrolled in vocational courses at higher secondary level was not large. All the 14 higher secondary schools offering vocational courses in the State were visited and

all the students of vocational subjects present on the day of data collection formed the sample. As such, the sample of the present study came to be 618 students.

2.3 Population and Sample of Vocational Teachers

The total number of vocational teachers according to SCERT Annual Report 2014-2015 is 52 and this constitutes the population of teachers. The need of sample did not arise as the number of population was not large. The teachers present at the time of data collection during their school visit present the sample of the teachers.

2.4 Population and Sample of Parents

The sample of parents was selected randomly from each course in every school. In some schools offering more than one course, two parents from each course were selected. So, the number of sample depends on the number of courses the schools offered.

3. Constructions of Tools:

Since there are no ready-made tools, the researcher developed tools for this purpose. To develop tools, the researcher first consulted different kinds of documents related to the study, interviewed experts having knowledge of vocational education, teachers and students of vocational education. The first draft of the tools were tried out in one school and few students and teachers. Based on the feedback, the tools were modified and finalized for use in collecting information. The following are the tools developed by the investigator for collection of data relevant for the study:

1) Observation Schedule cum Questionnaire for higher secondary schools offering vocational courses.

2) Information sheet cum Questionnaire for studying students' background, problems and perception.

3) Information cum Questionnaire for teachers studying teachers' background, problems and perception.

4) Interview Schedule for studying perception of parents about vocational courses in Mizoram.

4. Collection of Data

The required data for the present study were collected from both secondary and primary sources. Secondary sources comprised of books, journals, annual reports of SCERT, office documents, internet, e-book, e-journals and files etc., whereas primary sources comprised of heads of the schools, teachers and students.

5. Tabulation of Data

The data were properly classified accordingly. The classified data were tabulated, recorded and arranged orderly in statistical table for further analysis.

6. Statistical Treatment of Data

The data obtained after tabulation were analyzed quantitatively. For quantitative analysis descriptive statistics such as frequency and percentage were used.

MAJOR FINDINGS OF THE STUDY

The major findings of the present study were:

1. Findings related to status of vocational education at higher secondary stage of education in Mizoram:

1.1 Courses Offered with Year of Introduction

1) There were eight vocational courses offered at 14 higher secondary schools in Mizoram.

2) Computer Technique was the most popular course offered at 6 higher secondary schools.

3) Computer Software Application was firstly introduced in 2008 and again in 2010.

4) Computer Garment Design and Making was started in 2009 at 2 higher secondary schools.

5) Two higher secondary schools offered Automobile Engineering Technology which was started in 2008.

6) Medical Laboratory Technician was introduced in the year 2007 at two schools.

7) Horticulture was firstly introduced in 2007 at two schools and secondly in 2009.

8) Sericulture was offered at 4 higher secondary schools. It was started for the first time in 2008 and again in 2009 and 2010.

9) Office Secretaryship was the only vocational course offered at one school only. It was started in this school in the year 2009.

1.2 Type of higher secondary schools offering vocational courses

Among the higher secondary schools offering vocational courses, 71.43 per cent were Government schools, 21.43 per cent deficit schools and 7.14 per cent Adhoc Aided schools.

1.3 Admission Notification

64.29 per cent of higher secondary school offering vocational courses made admission notification. 42.86 per cent of these schools notified admission through newspaper, 28.57 per cent through school notice board and 7.17 per cent used television for notification of admission.

1.4 Criteria followed for admission

92.86 percent higher secondary schools gave admission on first come first serve basis. Only 7.14 schools conduct interview for selection of candidates.

1.5 Course wise distribution of range of fees paid at the time of admission

1) Sericulture has the highest range of fees *i.e.*, Rs 3000; the lowest fee is 1300 while the highest fee is Rs 5300.

2) Medical Laboratory Technician has the lowest range of fees *i.e.*, Rs 200; the highest fees is 5700 while the lowest fees is 5500.

1.6 School management wise range of fees in rupees

On the basis of school management the fees in different course are not same; Deficit HSS took more fees than Government HSS in all the courses.

1.7 Students enrollment

1) During the years 2014, 2015 and 2016, enrollment in Classes XI and XII of vocational courses was highest in Computer Technique course with 816 students seconded by 435 students and followed by Medical Laboratory Technician with 353 students enrolled.

2) The least number of students *i.e.*, 59 was found in Office Secretaryship followed by Commercial German Design and Making, and Automobile Engineering Technology each with 136 students enrolled.

1.8 Type of school building

1) Among the higher secondary school offering vocational education, 64.29 per cent of the school buildings were pucca and 35.71 per cent of the school buildings were semi pucca. There was no kutcha type of school building.

2) 92.86 per cent of the higher secondary schools have their own school building while 7.14 per cent of the higher secondary schools were run in rented buildings.

1.9 Provision of water, provision of electricity, provision of practical room and provision of school compound for doing practical work

1) Provision for water was sufficient in 92.86 per cent of higher secondary schools.

2) Electricity was available and regular in 57.14 per cent, available but irregular in 42.86 per cent.

3) Practical room was suitable in 85.71 per cent schools.

4) 85.71 per cent schools had suitable compound for doing practical work.

1.10 Condition of classrooms for vocational subjects

1) The classroom conditions for Computer Technique were 33.33 per cent very good, 33.33 per cent good and 33.33 percent average.

2) 50 per cent classrooms for Computer Software Application were good and 50 per cent were average.

3) 100 per cent classrooms of Commercial Garment Design and Making were in good conditions.

4) Automobile Engineering Technology had 50 per cent classrooms in very good condition and 50 per cesnt in average condition.

5) 50 per cent classrooms were very good and 50 percent were in good conditions for Medical Laboratory Technician course.

6) 66.67 per cent were average and 33.33 percent were poor in Horticulture.

7) Conditions of classroom for Sericulture were average in 25 per cent, poor in 25 per cent and good in 50 per cent higher secondary school.

8) 100 per cent of classroom conditions were in average conditions for Office Secretaryship.

1.11 Conditions of furniture for vocational subjects in hss

The number of desks and benches of all the higher secondary schools offering vocational courses were adequate in 85.71 per cent of the schools.

1.12 Instructional time allotted for theory and practical classes

Only three courses *i.e.,* Computer Software Application, Commercial Garment Design and Making, and Office Secretaryship allotted 70 per cent of instructional time for both theory and practical classes as required by the Scheme of Vocationalisation of secondary education.

1.13 Methods of teaching

Lecture and Practical methods were employed for imparting the skills for all the vocational courses. Apart from these, Home assignment, Project Work and Experiment methods were popularly used for vocational education at higher secondary stage of education in Mizoram.

1.14 Procedure of evaluation

For evaluation of students offering vocational courses, Practical, Tests, Project Work and Assignments were popularly used. The use of class test, internal test and weekly test indicates that the evaluation system was continuous. Seminar for evaluation of students was not popularly employed. The evaluation system employed taken as a whole indicates that it was comprehensive in many cases.

2. Major Findings and Conclusions Related to Background of Students

2.1 Class and course wise distribution of students

a) Of the total number of students *i.e.,* 618 enrolled in vocational courses at higher secondary level, 58.41 per cent were students of Class XI and 41.59 per cent Class XII.

b) Among vocational students of Class XI and XII, the most popular course was Computer Technique followed by Medical Laboratory Technician and Horticulture. In class XI, the course having the least number of students enrolled was Computer Software Application whereas in Class XII, it was Commercial Garment Design and Making.

2.2 Hometown of the students

Students from Aizawl City constituted the highest percentage (*i.e.*, 45.63%) of vocational students whereas 21.84 per cent were from villages, 17.48 per cent were from District Headquarters and 15.05 per cent were from the towns.

2.3 Local and non-local student

The percentages of non-local students were higher than those of local students in Automobile Engineering Technology, Horticulture and Sericulture.

2.4 Age of the students of vocational courses

Students of 17 years old constituted the percentage of 34.46 and students of 16 years old formed another 21.84 per cent. These students were in the right age group for Classes XI and XII.

As many as 40.28 per cent of vocational students were 18 and above years old who were over-aged for secondary classes. This indicated that they were repeaters of previous class or classes.

2.5 Gender

There were 58.41 per cent male students and 41.58 per cent female students.

2.6 Fathers' occupation

Self employment constituted the highest percentage of occupation among fathers of vocational students followed by Government service, business and service in private company. Computer Technique was the course opted by the largest percentage of students irrespective of their fathers' occupation.

2.7 Fathers' educational qualification

Majority (61.17%) of the fathers of vocational students were with HSLC and below qualifications. Only 16.50 per cent of the fathers were graduates, 2.75 per cent post-graduates, 0.32 per cent M.Phil and 0.65 per cent Ph.D degree holders.

2.8 Mothers' occupation

Self-employment constituted the highest percentage of occupation among mothers of vocational students followed by business, government service and service in private company. There were some mothers who were engaged in other

occupations. Computer Technique is the most popular course among students irrespective of their mothers' occupations.

2.9 Mother's educational qualification

Majority (73.46%) of the mothers of vocational students were with HSLC and below qualifications. Only 7.77 per cent of the mothers were graduates, 1.13 per cent post-graduates, and 0.32 per cent Ph.D degree holders.

2.10 Educational background in Class X

The majority (99.68%) of higher secondary school students opting vocational courses passed HSLC under Mizoram Board of School Education and that only 0.32 per cent passed it under Central Board of School Education. While 46.76 per cent of the students passed HSLC in 2014, 28.80 per cent passed in 2013. The rest passed it prior to 2013 which may imply that they did not continue their studies right away or they have repeated some classes.

Divisions of passing the HSLC examinations indicate that students pursuing vocational courses were mainly average and below average students. There were 0.16 per cent who passed HSLC in Distinction and 8.25 per cent who passed it in I Division. The rest 38.35 per cent and 53.24 per cent passed HSLC in II Division and III Division respectively.

2.11 Repeaters in different stage of school

Many students pursuing vocational courses at higher secondary stage of education were repeaters of classes at different stages of education such as primary, middle, high schools and higher secondary stages. High School was the stage in which percentage of repeaters was highest *i.e.,* 20.39 per cent followed by higher secondary school with 12.59 per cent repeaters, middle school with 11.16 per cent repeaters and primary school with 10.84 per cent repeaters.

2.12 Helpers in decision making to study vocational courses

Majority of the students *i.e.,* 79.29 per cent were decision makers in pursuing vocational course, parents of 17.31 per cent of students help their children in making the decision to study vocational courses. Only few students *i.e.,* 2.10 per cent were advised by teachers and 1.29 per cent by friends to study vocational courses.

3. Major Findings and Conclusions Related to Background of Teachers

The major findings on teachers' background at the time of data collection were classified as follows:

3.1 Hometown of vocational teachers

The largest percentages of vocational course teachers (57.57%) were from Aizawl City and teachers from district headquarters constituted the second largest percentage (*i.e.*, 30.30%). Only 9.09 per cent and 3.03 per cent of the teachers were from towns and villages respectively.

The largest percentages of teachers from Aizawl City (31.58%) were Computer Technique teachers and second largest percentage of teachers (15.71%) were teachers of Computer Software Application and Office Secretaryship. No teacher from Aizawl City was found in Horticulture course.

3.2 Age

There was no teacher below 25 years whereas 3.03 per cent teachers were above 41 years. Majority of the teachers (57.57%) were between 26 and 30 years followed by 31 and 35 years (27.27%). There were few teachers (12.12%) between 36 and 40 years.

3.3 Gender

Male teachers (54.54%) were more than female teachers (45.45%).

3.4 Teachers' academic record in HSLC

a) A high percentage (96.97 %) teacher passed HSLC under MBSE whereas only 3.03 per cent teachers passed the same under CBSE.

b) The largest percentage of teachers passed HSLC way back in 1996 to 2002 and the rest 27.27 per cent each in 1989 to 1995 and 2003 to 2009 respectively.

3.5 Teachers' academic record in HSSLC

a) A high percentage *i.e.*, 87.88 per cent teachers passed HSSLC under MBSE whereas only 12.12 per cent teachers passed the same under CBSE.

b) The largest percentage of teachers (54.55%) passed HSSLC in 2001 to 2005, 24.24 per cent and 15.15 per cent in 1996 to 2000 and 2006 to 2010 respectively. A few percentages of teachers passed in 1991 to 1995.

c) Teachers who passed HSSLC in II Division constituted the largest percentage (57.58%). There were no teachers who passed HSSLC in Distinction. The rest 24.24 per cent and 18.18 per cent passed in III and I Division respectively.

3.6 Teachers' academic record in Bachelor's Degree

a) A high percentage of teachers i.e., 39.39 per cent passed HSLC under MZU, whereas 36.36 per cent and 24.24 per cent passed under NEHU and other universities respectively.

b) The largest percentage of teachers (*i.e.*, 63.64%) passed Bachelor Degree in 2005 to 2009 and the second largest percentage *i.e.*, 21.21 passed in 2000 to 2004. A few percentages of 9.09 and 6.06 each passed in 2010 to 2014 and 1995 to 1999.

c) A high percentage of teachers (51.52%) passed Bachelors Degree in II Division and 36.36 per cent of teachers passed in I Division. There were no teachers who passed in III Division while only 3.03 per cent passed in Distinction.

3.7 Teachers' academic record in Master's Degree

a) There were 75.76 per cent post graduate teachers and majority of them *i.e.*, 72 per cent have completed their Masters' Degree under the universities other than MZU and NEHU.

b) The largest percentage of teachers (*i.e.*, 40%) passed in 2010 to 2014, 40 per cent passed in 2005 to 2009 and 16 per cent of them passed in 2000 to 2004.

c) Majority of the teachers (68%) passed in I Division. Besides, only 4 per cent passed in III Division and 24 per cent passed in II Division.

3.8 Educational qualifications

All the teachers of various vocational courses had the required educational qualifications for their own subjects as per norms of SCERT.

3.9 Year of appointment

Majority of the teachers (66.67%) were appointed in 2010, 12.12 per cent of teachers were appointed in 2007. Each 9.09 per cent teachers were appointed in 2006 and 2008 and a few per cent of teachers (3.03%) were appointed in 2009.

3.10 Nature of appointment

Majority of the teachers *i.e.*, 84.85 per cent teachers were appointed on contractual basis. Only 3.03 per cent teachers were appointed as regular teachers and 12.12 per cent were temporary teachers. There were no part time teachers.

3.11 Teaching experience before joining

There were 18.18 per cent teachers who had teaching experience before joining while 81.82 per cent teachers had no teaching experience.

3.12 Teachers who underwent training

a) Computer Technique: 60 per cent of teachers underwent training.

b) Computer Software Application: 25 per cent of teachers underwent training.

c) Commercial Garment Design and Making: There was no teacher who attended any kind of teachers' training.

d) Automobile Engineering Technology: 50 per cent of teachers attended training.

e) Medical Laboratory Technician: 33.33 per cent of teachers attended training.

f) Horticulture: 33.33 per cent of teachers underwent training.

g) Sericulture: 66.67 per cent of teachers underwent training.

h) Office Secretaryship: 33.33 per cent of teachers underwent training.

4. Findings Related to Problems faced by Students of Vocational Courses

The major findings related to problems faced by students of vocational education at the higher secondary stage were as follows:

4.1 Problems regarding the vocational course they pursued:

a) Worried about college admission and further studies was the biggest problem among the vocational students which was cited by 49.35 per cent students.

b) The next biggest problem was worried about job placement as cited by 35.60 per cent of students.

c) Other problems cited by 20.33 per cent and below in order of their intensity were: the course not of their first choice, thinking of changing the subject into general stream, high admission fees, not interested in the course and other streams looking down upon us.

d) Out of 49.35 per cent students who were worried about college admission and further studies, 30.82 per cent were from Computer Technique, 23.28 per cent were from Medical Laboratory Technician and 17.38 per cent were from Horticulture.

e) Students who were worried about job placement comprising of 35.60 per cent of vocational students were also mainly from Computer Technique and Medical Laboratory Technician who formed 42.73 per cent and 27.73 per cent respectively of students with this problem.

4.2 Problems faced related to facilities:

Insufficient equipments was a problem for 40.45 per cent of students, irregular power supply for 32.36 per cent, congested classroom for 29.13 per cent and insufficient furniture for 13.59 per cent of the students.

4.3 Problems with regards to practical work:

Insufficient number of practical classes conducted was stated as a problem by 38.03 per cent, irregular supply of electricity by 26.38 per cent, too congested practical room/ laboratories by 22.65 per cent, and lack of required space for doing practical work by 20.71 per cent.

Out of the students facing problems related to practical work, the highest percentages was from Computer Technique course and Computer Software Application was the course having the least number of students facing the problems.

4.4 Problems regarding textbook:

a) Costly textbook was the highest problem faced by 32.69 per cent of students. ‘Textbooks not available in all the subjects’ was the second highest problem faced by 30.74 per cent of students and the problem ‘textbooks needed to be procured from outside Mizoram’ was faced by 26.70 per cent of the students. Other problems such as ‘do not have textbooks’, ‘textbooks not available in time’ and ‘textbooks not available in the market’ were faced by 24.11 per cent, 23.62 per cent and 16.02 per cent students respectively.

b) Among the students stating the problems related to textbooks, most of them were those pursuing courses of Computer Technique, Medical Laboratory Technician and Horticulture.

4.5 Problems with regard to contents of the textbooks:

a) **U**navailability of textbooks written in Mizo was the highest problem faced by 31.72 per cent of students. Contents of the textbooks were difficult to understand for 29.77 per cent and 5.83 per cent find that textbooks did not cover the whole syllabus.

b) Students pursuing Computer Technique course were mostly the ones who stated various problems related to contents of textbooks**.**

4.6 Problems related to teachers:

a) The highest problem that the students faced related to teacher was unfriendly attitude of teachers towards students mentioned by 20.55 per cent. Irregularity of teacher in taking class was the second highest problem stated by 18.12 per cent of teachers and for 7.44 per cent of students, insufficient number of teachers was a problem.

b) Out of the few students claiming to have problems related to teachers, students of Horticulture constituted the highest percentage who mentioned irregularity of teachers in taking classes and insufficient number of teachers as prominent problems.

4.7 Problems of students relating to on-the-job training:

a) A major problem of students relating to on-the-job training is that the training centre was too far from school for 14.72 per cent of the students. For 13.75 per cent of students, their problem was that the training centre was not well equipped.

b) For Computer Technique students, 'the training centre not well-equipped' was the biggest problem followed by 'the centre too far from school' and vice versa for Horticulture students.

4.8 Problems of students relating to method of teaching:

36.25 per cent of the students faced problem as time allocated for practical class was not enough and 21.52 per cent of students found it difficult to understand the way their teachers taught them. For 16.99 per cent of students, theory class was

not helpful to understand the concept and practical class was not helpful enough to develop their skills for 9.39 per cent. Time allocated for theory class was not enough for 8.90 per cent of students and for 8.25 per cent of students, the methods of teaching adopted by the teachers were not helpful/ effective enough.

5. Findings Related to Problems Faced by Teachers

Major findings related to problems faced by teachers of vocational education at the higher secondary stage were as follows:

5.1 Problems related to salary:

a) 60.61 per cent teachers faced problems due to irregular payment of salary and 33.33 per cent teachers took their salary not at par with that of the general courses teachers as a problem.

b) Among the teachers who faced problems due to irregular payment of salary, 35 per cent were Computer Technique teachers while teachers of Automobile Engineering Technology and Office Secretaryship have no problem at all.

c) Salary is not at par with that of the general teachers was pointed out by 36.36 per cent teachers of Computer Technique and 9.09 to 18.18 per cent of other course teachers except teachers of Commercial Garment Design &Making and Medical Laboratory Technician.

5.2 Problems related to insufficient number of vocational teachers:

a) 66.67 per cent of teachers have problems of heavy workload, 21.21 per cent have to teach the papers in which they were not confident and 9.09 per cent faced difficulty as they cannot attend any training.

b) Among the teachers whose workload was too heavy, 22.73 per cent were Computer Technique teachers, 13.64 per cent to 18.18 per cent were other course teachers.

c) Each 28.57 per cent teachers of Computer Software Application and Commercial Garment Design and Making and each 14.29 per cent teachers of Computer Technique, Automobile Engineering Technology and Sericulture have to teach the papers in which they were not confident.

d) Each 33.33 per cent teachers of Computer Technique, Computer Software Application and Sericulture faced problems as they could not attend any training.

e) 66.67% of teachers claimed to have too heavy workload. Again, the highest percentage of teachers claiming to have this problem came from Computer Technique.

5.3 Problems related to facilities:

a) 48.48 per cent teachers faced difficulty due to irregular power supply, 45.45 per cent due to congested classroom, and 30.30 per cent each due to electric wiring not in good condition and insufficient furniture for all the students.

b) Irregular power supply was a problem for a high percentage i.e. 43.8 teachers of Computer Technique, whereas it was not a problem at all for teachers of Horticulture and Sericulture.

c) Teachers having problems due to congested classroom were 26.7 per cent of Computer Technique and 6.7 per cent to 20 per cent teachers of other courses.

d) Electric wiring not in a good condition was a problem for 40 per cent teachers of Computer Technique, 30 per cent teachers of Horticulture, 20 per cent teachers of Medical Laboratory Technician and 10 per cent teachers of Computer Software Application.

5.4 Problems related to practical work:

a) 36.36 per cent of teachers have problems due to small classrooms for doing practical work. Again 36.36 per cent teachers could not do practical work due to irregular power supply, 27.27 per cent faced problems due to insufficient furniture for all the students. For 18.18 of teachers insufficient space for doing practical work was the problem.

b) For 33.33 per cent teachers of Computer Technique, each 16.67 per cent teachers of Computer Software Application and Automobile Engineering Technology, 25 per cent teachers of Horticulture and 8.33 per cent teachers of Office Secretaryship classrooms were too small for practical work.

c) A high percentage of Computer Technique teachers i.e. 41.67, 8.33 per cent and low percentages teachers of other courses ranging from 8.33 to 16.67 per cent faced difficulty in doing practical work due to irregular power supply whereas teachers of Horticulture and Sericulture were free from this problem.

d) Insufficient furniture created a problem for 44.44 per cent teachers of Computer Technique and 11.11 per cent of each teacher of other courses excluding Computer Software Application and Horticulture.

e) No sufficient space for doing practical work was a problem for 50 per cent teachers of Computer Technique and each 16.67 per cent each teachers of Automobile Engineering Technology, Medical Laboratory Technician and Horticulture.

5.5 Problems relating to equipment:

a) Insufficient equipment for all the students was the biggest problem as a high percentage of teachers (60.61%) mentioned it. The need of frequent replacement of the available equipments was a problem for 45.45 per cent teachers and bad qualities of the available equipments was a problem for 42.42 per cent teachers.

b) For 27.27 per cent of teachers, replacing the equipments with their own expense sometimes was a problem, 21.21 per cent of teachers also pointed out that the available equipments do not last long. 18.18 per cent of teachers have problems as the required equipments were not available in time and were not available in the local market.

5.6 Problems relating to students:

a) The above table (Table 4.5.6) reveals that 60.61 per cent teachers faced problem as there were some students who want to change their subjects to other stream. 30.30 per cent teachers also have a problem of students dropping.

b) Students' wanting to change their subjects was a problem for each 15.15 per cent teachers of Computer Technique, Computer Software Application, Medical Laboratory Technician and Office Secretaryship and each 10 per cent teachers of Commercial Garment Design and Making, Automobile Engineering Technology, Horticulture and Sericulture.

c) All the course teachers ranging from 10 per cent to 30 per cent teachers excluding Horticulture teachers have a problem of students dropping out.

5.7 Problems faced relating to study materials for teaching theory:

60.61 per cent of teachers faced the problem of unavailability of textbooks in the local market. Textbooks need to be procured from outside Mizoram was a

problem for 42.42 per cent of teachers. For 39.39 per cent of teachers, textbooks do not covering the whole syllabus and for 18.18 per cent of teachers, textbooks were too costly were problems.

5.8 Problems with regard to contents of the textbooks/books

21.21 per cent of teachers faced the problems of unavailability of textbooks written in Mizo and18.18 per cent of teachers faced the problem of contents not related to the syllabus. For 9.09 per cent of teachers, contents of the textbooks do not help in developing the skills of the learner and for 6.06 per cent, contents of the textbooks that were difficult to understand create a problem.

5.9 Problems Faced in transacting the skills

63.64 per cent of teachers of vocational subjects faced the problem in transacting the skills owing to students' weakness in English. The second highest problem was the available teaching aids that do not meet the requirements as mentioned by 27.27 per cent of teachers. Irregular electricity in the classroom creates problems for 24.24 per cent teachers and large size of the class creates problem in teaching for 12.12 per cent of teachers.

For all the course teachers ranging from 4.76 per cent to 23.81 per cent excluding teachers of Medical Laboratory Technician weakness of students in English was a problem. The available teaching aids do not meet the requirement and was a problem for each 33.33 per cent teachers of Computer Technique and Horticulture. It also creates a problem for each 11.11 per cent teachers of Automobile Engineering Technology, Sericulture and Office Secretaryship.

A high percentage i.e. 62.50 per cent teachers of Computer Technique, 25 per cent teachers of Computer Software Application and Automobile Engineering Technology faced problem in transacting the skills due to irregular electricity in the classroom. Large size of the class was a problemmainly for teaching of Computer Technique who form 75 per cent and for teachers of Automobile Engineering Technology who constitute 25 per cent of teachers facing this particular problem.

5.10 Problems faced in relation to on-the-job training

a) The training centre that was not well equipped was a problem for 36.36 per cent teachers. Out of which the highest percentage i.e. 41.67 per cent was constituted by teachers of Computer Technique.

b) For 24.24 per cent of teachers, the centre too far from school was a problem of which 37.50 per cent was constituted by teachers of Sericulture.

5.11 Problems faced regarding job placement

a) The majority teachers i.e. 54.55 per cent mentioned that job opportunities were very limited in Mizoram as the state was backward in industry. The second highest problem stated by 51.52 per cent of teachers was that plus 2 level was not accepted in many jobs

b) Teachers of Computer Technique and Sericulture constitute the largest percentages (22.22 % respectively) of teachers highlighting 'very limited job opportunities in Mizoram as the problem. Again, for the problem, 'plus 2 level not accepted/ qualified in many jobs', the highest percentage of teachers stating this was from teachers of Computer Technique.

6. Findings Related to Perceptions of Students about the prospects of Vocational Education

Major findings related to perception of students of vocational courses were as follows:

6.1 Perception of students about introducing more vocational courses in higher secondary schools:

a) 85.11 per cent felt the need of introducing more vocational courses in Mizoram

b) Photography was the most frequently preferred course suggested by 45.95 per cent respondents followed by Hospital Documentation (Health and Para medical) suggested by 43.36 per cent and Health Care and Beauty which is suggested by 36.24 per cent of the respondents.

c) Other courses perceived to be good for introduction in higher secondary school in order of their importance were: Marketing & Salesmanship (Business &

Commerce) recommended by 33.50 per cent, (Engineering & Technology) by the 32.20 per cent respondent, Bakery & Confectionary by 27.35 per cent respondents.

c) Catering and Restaurant Management by 24.60 per cent, Dairying (Agriculture), Vegetable Seed Production by 23.14 per cent and Food Preserving and Processing (Home science) by 24.84 per cent of respondents.

d) Clock and Watch Technology, Steno-typing, Floriculture were the least suggested courses for introduction in higher secondary school.

6.2 Vocational courses which have prospects for better job placement in Mizoram

Computer Technique was the course that highest percentage of the respondents i.e. 26.70 per cent thought to have better prospects for job placement in Mizoram. Computer Software Application and Medical Laboratory Technician came in second place as 15.86 per cent respondents perceived the subjects have a good job placement opportunity in Mizoram.

6.3 Vocational courses which giving better job placement outside Mizoram

Computer Technique was the course perceived to be having best prospect for job placement outside Mizoram followed by Computer Software Application receiving choices from 19.90 per cent students.

6.4 Vocational courses which gave better chance for self employment

a) 14.72 per cent respondents thought Computer Technique had a best chance. 12.46 per cent respondents and 10.03 per cent perceived Automobile Engineering Technology and Medical Laboratory Technician as giving a better chance for self employment respectively.

b) Majority of the students considered their courses as not having good chance for self employment.

6.5 Offering more vocational courses in more school

a) Majority of the students i.e. 52.26 per cent thought that offering vocational courses in more schools was needed to make the courses more popular among the people.

b) 42.07 per cent respondents also thought that offering vocational courses in more schools was needed as more students can be enrolled to study vocational courses.

6.6 For which group of student vocational courses is best suitable:

a) 48.06 per cent respondents thought that vocational course was best suitable for average performing students.

b) Out of all the respondents, 19.90 per cent students perceived vocational course as best suitable for poor performing students and14.56 per cent as best suitable for good performing students.

6.7 Ways in which Vocational education can be improved:

a) Having more practical works and providing more infrastructural facilities were the two most important ways as majority of students (62.62% and 59.39%) perceive so.

b) Next important ways were: i) having more experienced teachers (as perceived by 42.88%); ii) improving the service conditions of vocational teachers (by 37.54%); iii) enhancing the professional skills of vocational teachers through training programs (by 34.47%) and iv) improving on the job training (by 28.96%).

c) Rest of the means mentioned by few students ranging from 4.85 per cent to 19.9 per cent were: i) revising the syllabus (by 19.9%); ii) increasing the size of the class (by 6.63%); introducing more vocational courses (5.34%) and reducing the size of the class (4.85%).

6.8 About State Government in playing its role:

i) It should gave more grants for the maintenance of the existing vocational courses (perceived by 56.47%)

ii) It should provide more funds for vocational courses (perceived by 52.91%)

iii)It should offer more courses in more schools (perceived by 50.48%)

iv)It should give more importance to vocational education (perceived by 47.90%)

7. Finding Related to Perception of Teachers about the prospects of Vocational Education

Major findings related to teachers' perception on vocational courses at higher secondary stage of education in Mizoram were as follows:

7.1 Perception about introducing more vocational courses at higher secondary school in Mizoram:

a) Health Care & Beauty Culture and Food Preserving & Processing (home science) were the courses that 45.45 per cent and 42.42 per cent respondents perceived as necessary for newly introduction.

b) Catering & Restaurant Management and Bakery & Confectionery were the courses suggested to be introduced by a high per cent of respondents i.e. 39.39 per cent and 36.36 per cent respectively. Marketing & Salemanship (Business & Commerce), Lineman (Engineering Technology), Hospital Documentation (Health & Paramedical), Photography (Humanities and others) and Photography (Humanities & others) were suggested by 33.33 per cent respondents each. Steno-typing was also chosen by 30.30 per cent respondents for introduction in Mizoram.

c) Other courses like Dairying (Agriculture) and Floriculture were perceived to be introduction by 21.21 per cent and 18.18 per cent respondents respectively and, Vegetable Seed Production and Clock & Watch Technology by 15.15 per cent each.

7.2 Perception about offering more vocational courses in their school

a) 36.36 per cent teachers wanted to introduce more vocational courses in their school.

b) Majority of the teachers did not perceive the need of introducing some more vocational courses in the schools.

7.3 Vocational courses having prospects for better job placement in Mizoram:

a) Medical Laboratory Technician was perceived by 24.24 per cent respondents to be the best. Computer Technique, Automobile Engineering Technology and Office Secretaryship occupied the second place as each 15.15 per cent respondents perceived them as having prospect for job placement in Mizoram.

b) Vocational teachers perceived the existing vocational courses as not having good prospects for better job placement in Mizoram.

7.4 Vocational courses having prospects for better job placement outside Mizoram:

a) 33.33 per cent perceived that Computer Technique had the best prospect followed by Commercial Garment Design and Making as perceive by 12.12 per cent respondents. Computer Software Application had the best chance for 6.06 per cent. For 9.09 per cent respondents Automobile Engineering Technology had the best chance and for each 3.03 per cent Medical Laboratory Technician, Horticulture, Sericulture and Office Secretaryship had the best chance for employment outside Mizoram.

b) As the percentages of teachers perceiving the existing vocational courses as having prospects for better job placement outside Mizoram were all very small, it can be interpreted that vocational courses offered at higher secondary level in Mizoram do not have prospect for job placement outside Mizoram.

7.5 Vocational courses which gave better chance for self-employment:

Commercial Garment Design and Making gives a best chance for self employment based on perception of 27.27 per cent respondents. Automobile Engineering Technology came in second place in the perception of teachers as giving a good chance for self employment.

7.6 About offering more vocational courses in more school:

a) Offering vocational courses in more schools were needed mainly to popularise the courses among people as this perception were held by 54.54 per cent of the teachers.

b) To meet the priority need of the local area/ people as perceived by 42.42 per cent of the teachers.

c) To give opportunities for students in different areas to study vocational courses as perceived by 31.39 per cent.

d) To enrol more students in vocational courses as perceived by 30.30 per cent of the teachers.

7.7 Ways in which vocational courses introduced in Mizoram can be improved as perceived by majority of the teachers were:

a) By improving the service conditions of vocational teachers perceived by 69.70 per cent teachers.

b) By providing more infrastructural facilities perceived by 66.67 per cent teachers

c) By updating and improving the curriculum perceived by 51.51 per cent teachers, and

d) By improving on the job training perceived by 51.51 per cent teachers.

7.8 For which group of students Vocational course was suitable:

Majority of the teachers (72.72%) perceived vocational course as suitable for average performing students whereas only 15.15 per cent of teachers perceived it as suitable for poor performing students. There were 45.45 per cent teachers who hold the view that the courses were suitable for good performing students.

7.9 Teachers of vocational courses perceived training as very important for improvement of teaching as responses of as many as 90.91 per cent teachers

7.10 90. 91 per cent teachers perceived their teaching would be improved if they attend more training.

7.11 57.57 per cent teachers perceived the present evaluation system suitable to assess the ability of the students.

7.12 63.64 per cent teachers perceived on-the-job training helps the students in finding job.

7.13 About State Government in playing its role:

a) No vocational course teacher perceived Government of Mizoram as having done what it supposed to do. As many as 84.84 per cent teachers feel that the Government should give more importance to vocational education and 78.79 per cent wanted the Government to provide more funds for the courses.

b) A small percentage of teachers (30.30%) also think that the government should offer more courses in more schools and give more funds for the courses.

8. Findings Related to Perceptions of Parents about the prospects of Vocational Course in higher secondary school

Major findings related to perception of parents on vocational education at higher secondary school in Mizoram were as follows:

8.1 43.18 per cents parents perceived the vocational courses offered in Mizoram Higher secondary schools as sufficient.

8.2 Vocational courses having better prospects for job placement in Mizoram:

a) Low percentages of parents perceived the existing vocational courses as having prospects for better job placement in Mizoram.

b) Computer Technique receives the highest response indicating that it was considered to be having better job placement in the state.

8.3 Vocational courses having better prospects for job placement outside Mizoram:

a) Low percentage of parents ranging from 4.55 to 36.36 per cent only perceived the courses as having prospect for job placement.

b) Parents perceived the courses in which their children were enrolled as having better prospect for job placement outside the state.

8.4 Vocational courses having better prospects for better chance for self employment:

The highest percentage of response (31.82) was received by Computer Technique.

8.5 About offering vocational courses in more schools:

Majority of parents (65.91%) felt the need of offering vocational courses in more schools as these will be more opportunities for students in different areas to study vocational courses.

8.6 For which group of student vocational courses was best suitable for:

Vocational course was most suitable for average performing students as 84.09 per cent of parents perceived so. Good performing students by 13.64 per cent and for poor performing students by 2.27 per cent of parents.

8.7 Ways in which vocational courses can be improved as perceived by parents:

Majority of parents (68.18%) were in favor of providing more infrastructural.

8.8 About State Government in playing its role:

a) 34.09 per cent of parents perceived the Government of Mizoram as having done what it was supposed to do.

b) 6.82 per cent perceived that it should provide more funds for vocational courses,

c) 4.55 per cent perceived that it should offer more courses in more schools and it should give more grants for the maintenance of the existing vocational courses.

8.9 Majority of the parents i.e. 68.18 per cent were satisfied with the vocational course being pursued by their son/daughter.

8.10 More than half of the parents (59.09%) perceived the vocational courses pursued by their children as giving better opportunity for employment than the general course.

8.11 As perceived by 63.64 per cent parents, opportunity for further studies was limited for students pursuing vocational courses.

8.12 Majority of parents (68.18%) wanted their daughters/sons to pursue higher education in vocational course than in general education.

RECOMMENDATION FOR THE IMPROVEMENT OF VOCATIONAL EDUCATION IN MIZORAM

From the findings of the study, the following recommendations are made for the improvement of vocational education at higher secondary stage of education in Mizoram:

1. As many students of vocational courses are worried about job placement, concerned authority at the state level should take care of this by having a tie-up with potential employers.

2. The State Government should appoint a Committee or entrust some government officials to take care of the needs of students of vocational courses such as college admission and further studies for those who want to continue their studies, and job placement and self-employment for those who want to earn a living.

3. Producing employable school graduates should be the focus of the programme. For this, internship and on the job training should be taken seriously and carried out in an effective manner.

4. Concerned authorities should take the necessary actions for solving the problems related to facilities such as insufficient equipment, insufficient furniture, congested classrooms and irregular power supply which hamper the effective functioning of vocational education in the state.

5. Attention should be given to the problems regarding conduct of practical works such as congested practical rooms/ laboratories/ workshop, insufficient number of practical classes and lack of required space, and remedial measures should be taken for these.

6. SCERT, Mizoram should give more importance to capacity building of teachers of various vocational subjects. More relevant training courses with Resource Persons having the relevant expertise should be organised more regularly. Attendance of all the teachers in this kind of training should be ensured.

7. SCERT should provide career awareness programme and career guidance to students of vocational courses. The concerned higher secondary schools can also make internal arrangement on their part by inviting experts in the courses offered.

8. Adequate number of regular teachers needs to be appointed to effectively carry out the programmes of vocational education. Regularity and efficiency of the teachers should be ensured.

9. More time needs to be allotted for practical classes to address the complaint of the students in this regard. At the same time, practical classes should be conducted in an efficient manner so as to develop the required skills for different courses or trades.

10. Teachers of vocational courses should be motivated by improving their service condition and by giving them the salary deserved by them and that also regularly.

11. The required number of teachers should be appointed to run the courses effectively. At the same time, only teachers with the essential qualifications should be appointed for each course.

12. To make the teachers more efficient, the equipment and facilities required by them should be made available to them.

13. There should be proper linkage of institutions offering vocational courses and on-the-job training centre.

14. While selecting the centres for on-the-job training, it should be ensured that the selected centres are equipped with the required facilities.

15. Some more courses which have the prospect of giving employment or self-employment need to be introduced in higher secondary schools in Mizoram. Courses like Photography, Health Care & Beauty Culture, Food Preserving & Processing, Catering & Restaurant Management, Bakery & Confectionery are recommended for this.

16. More funds should be allocated for the maintenance of infrastructural facilities and equipments.

17. Steps should be taken to increase the enrolment of students. Admission should be notified through various means to make the vocational courses popular.

18. More practical classes should be conducted in every school.

19. Teachers should be approachable for the students to solve their problems.

20. Class should be taken more regularly.

21. Different methods of teaching should be adopted by the teachers to make their teaching more effective for the learners.

22. Prior preparation is a must for teachers to have effective teaching

REFERENCE:

Mohankumar, V. (2008). The need for vocational education: Changing economic and labour market scenario. *Indian Journal of Adult Education.* 69 (3), 70 91.

Swain, S.K. (1998). *Trends and Issues in Indian Education.* Delhi: Kalyani Publishers. *pp. 2.4-2.5,*