

Running Head: HIGHER SECONDARY EDUCATION SYSTEM

A CRITICAL STUDY OF HIGHER SECONDARY EDUCATION SYSTEM IN KERALA

ANITHA MANGAD

Thesis

Submitted for the degree of

DOCTOR OF PHILOSOPHY IN EDUCATION

Supervised By

Dr. BAIJU K. NATH

Assistant Professor

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
2017**

DECLARATION

I, **ANITHA MANGAD**, do here by declare that, this thesis, entitled “**A CRITICAL STUDY OF HIGHER SECONDARY EDUCATION SYSTEM IN KERALA**” is an original work done by me under the supervision and guidance of **Dr. BAIJU K. NATH**, Assistant Professor, Department of Education, University of Calicut, for the award of Degree of Doctor of Philosophy in the faculty of Education. I also declare that this thesis or any part of it has not been submitted by me for the award of any other Degree, Diploma, title or recognition before.

Place: C U Campus

ANITHA MANGAD

Date : 13.10.2017

Dr. BAIJU K. NATH
Assistant Professor,
Department of Education,
University of Calicut

Certificate

I, **Dr. BAIJU K NATH**, do hereby certify that, this thesis entitled “**A CRITICAL STUDY OF HIGHER SECONDARY EDUCATION SYSTEM IN KERALA**” is a record of bonafide study and research carried out by **ANITHA MANGAD**, under my supervision and guidance and that it has not been previously formed the basis for the award of any other Degree, Diploma, title or recognition.

Place: Calicut University
Date:

Dr. BAIJU K. NATH
(*Supervising teacher*)

Dr. BAIJU K. NATH
Assistant Professor,
Department of Education,
University of Calicut

Certificate

I, **Dr. BAIJU K NATH**, do hereby certify that, this thesis entitled “**A CRITICAL STUDY OF HIGHER SECONDARY EDUCATION SYSTEM IN KERALA**” is a record of bonafide study and research carried out by **ANITHA MANGAD**, under my supervision and guidance and that it has not been previously formed the basis for the award of any other Degree, Diploma, title or recognition.

The thesis is revised as per the modifications and recommendations reported by the adjudicators and re-submitted.

Place: Calicut University
Date:

Dr. BAIJU K. NATH
(Supervising teacher)

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C.U. Campus

ANITHA MANGAD

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

<i>Chapter</i>	<i>Title</i>	<i>Page No.</i>
I	INTRODUCTION	1-16
II	HISTORICAL OVERVIEW AND REVIEW OF RELATED STUDIES	17-108
III	METHODOLOGY	109-174
IV	ANALYSIS INTERPRETATIONS	175-374
V	SUMMARY, FINDINGS, CONCLUSION AND SUGGESTIONS	375-428
	REFERENCES	429-448
	APPENDICES	

LIST OF TABLES

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
1.	Higher Secondary Schools in Kerala (1990-2016)	41
2.	Enrolment of Students in Higher Secondary Schools from 1990 - 1996	49
3.	Enrolment of Students in Higher Secondary Schools 2009-2016	50
4.	No of Batches in Higher Secondary Schools in Kerala from 1991-2016	51
5.	No. of Students Appeared and Passed in the Higher Secondary Examination (1991-92 to 1995-96)	52
6.	Pass % of HSS Students (1991-92 to 2016-17)	53
7.	Number of SC Students Appeared and Passed in Higher Secondary Examination (2006-07 to 2015-16)	54
8.	Number of ST Students Appeared and Passed in Higher Secondary Examination 2006-07 to 2015-16	55
9.	Regional Deputy Director's Offices in Kerala	55
10.	Growth of Vocational Higher Secondary Education in Kerala 1988-2017	60
11.	The Structure of Vocational Higher Secondary Courses in Kerala	68
12.	Number of Students Appeared and Passed Vocational Higher Secondary Examination 1995-2016	69
13.	Vocational Higher Secondary Result 1995-2016	71
14.	Sample Selected for the Study	116
15.	Area wise Distribution of Questions in Questionnaire to HSS teachers	121
16.	Area wise Distribution of Questions for Vocational Higher Secondary Teachers	132
17.	Area wise Distribution of Questions in Questionnaire to HSS students	144

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
18	Area wise Distribution of Questions in Questionnaire to VHSS Students	154
19	Area wise Distribution of Questions in interview schedule for higher Secondary Principal	168
20	Area wise Distribution of Questions in Interview schedule for VHSS Principal	169
21	Location and Facilities of Higher Secondary Schools	177
22	Infrastructural Scarcities Noticed by HSS Principals	179
23	Administration and Constraints in Teaching	180
24	Constraints in First Year Admission Process	181
25	Problems in Single Window Admission Process	182
26	Parent Teacher Association in HSS	183
27	Satisfaction in the Functioning of PTA	185
28	Effectiveness of Cluster Meetings	185
29	Management of Open School Students	186
30	Constraints in the Management of Open Schools Students	186
31	Financial Aids from Government Authority and Office Management (N=58)in HSS	188
32	Difficulties in Correspondence with Various Offices	189
33	Constraints in Accessing Circulars and Orders	190
34	Administration of Daily Activities of Higher Secondary Schools	191
35	Administrative Training to HSS Principals	192
36	Effectiveness of New Time Schedule	193
37	Problems in New Time Schedule	193
38	Infrastructural Scarcities Noticed by Vocational Higher Secondary Principals (N=12)	201
39	Administration and Constraints in Teaching to VHSS principals	202
40	Constraints in Admission Process to VHSS principals	203

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
41	Parent Teacher Association in VHSS	204
42	Effectiveness of Cluster Meetings to VHSS Principals	205
43	Financial Aids from Authority and Office Management in VHSS	206
44	Management of Daily School Activities in VHSS	207
45	Administrative Training to VHSS Principals	208
46	Library Facilities in Higher Secondary Schools	212
47	Problems in Utilization of Library Facilities (N=62)	213
48	Higher Secondary Curriculum	214
49	Suggestion Regarding Further Improvement of Syllabus in HSS (N=48)	215
50	Constraints Faced by Higher Secondary Teachers in Student Centered Curriculum Transaction (N=145)	216
51	Constraints Faced by HSS Teachers in Advance Preparation for the Class (N=28)	217
52	Text Book in Higher Secondary (N=145)	218
53	Reasons for Inadequate Time for Transacting HSS Curriculum (N=50)	220
54	AV Aids in Higher Secondary Schools (N = 145)	222
55	Laboratory Facilities in Higher Secondary Schools (N=85)	223
56	Shortcomings in the Laboratory Reported by Higher Secondary Teachers (N=35)	224
57	Attendance of Higher Secondary Students (N=145)	225
58	Individual Attention in HSS	225
59	Measures Adopted to Handle Below Average Students by Higher Secondary Teachers (N=145)	226
60	Measures Adopted to Handle Gifted Students by Higher Secondary Teachers (N= 145)	227
61	Evaluation in Higher Secondary Schools (N=145)	228
62	Procedures Adopted for Self Evaluation by HSS Teachers (N=145)	229

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
63	Problems in Ensuring the Objectivity of Unit Test (N=36)	230
64	Constraints in Evaluating HSS Student's Performance (N=145)	231
65	Constraints in CCE (N=145)	233
66	Training Needs of Higher Secondary Teachers (N=145)	234
67	Other Activities in Higher Secondary Schools (N=145)	237
68	Functioning of PTA in Higher Secondary Schools (N=145)	240
69	Duties Other than Academic Work in HSS	241
70	Library Facilities in Vocational Higher Secondary Schools (N=37)	250
71	Problems in Utilization of Library Facilities	251
72	Vocational Higher Secondary Curriculum (N=37)	252
73	Suggestion Regarding Further Improvement of Vocational Higher Secondary Syllabus	253
74	Constraints Faced by VHSS Teachers in Student Centered Curriculum Transaction	253
75	Text Book in Vocational Higher Secondary	254
76	Reasons for Inadequate Time for Transacting VHSS Curriculum	256
77	Available AV Aids in Vocational Higher Secondary	257
78	Laboratory Facilities in Vocational Higher Secondary Schools (N=24)	258
79	Shortcomings in the Lab Reported by Vocational Higher Secondary Teachers (N = 11)	259
80	Attendance of Vocational Higher Secondary Students (N=37)	259
81	Individual Attention to VHSS Students	260
82	Measures Adopted to Handle Below Average Students by Vocational Higher Secondary Teachers	261
83	Measures Adopted to Handle Gifted Students by Vocational Higher Secondary Teachers	261
84	Evaluation in Vocational Higher Secondary Schools	262

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
85	Procedure Adopted for Self Evaluation by Vocational Higher Secondary Teachers	263
86	Constraints in Evaluating Student's Performance by Vocational Higher Secondary Teachers	264
87	Suggestions for Effective Camp Valuation	265
88	Constraints in Continuous and Comprehensive Evaluation in VHSS	266
89	Training Needs of Vocational Higher Secondary Teachers	267
90	Other Activities in VHSS	269
91	Functioning of PTA in Vocational Higher Secondary Schools	270
92	Duties Other Than Academic Work	270
93	Status of VHSE	271
94	Reasons for Selecting Vocational Higher Secondary as a Last Option	273
95	VHSE and Higher Education	274
96	Attraction to VHSE	275
97	Incentives Required for Motivating Students	276
98	Human Resource Empowerment to VHSS teachers	276
99	Areas of Preferences for Innovative Courses	277
100	Medium of Instruction	285
101	Difficulties Due to Change in Medium of Instruction	285
102	Doubt Clarification in HSS	286
103	Library Facilities to HSS students	287
104	Strategy Used for the Distribution of Library Books in Higher Secondary Schools	288
105	Constraints in Utilization of Library Facilities to HSS students	288
106	Laboratory Facilities in Higher Secondary Schools (N=162)	289
107	Difficulties in Utilizing Lab Facilities in Allotted Time	290

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
108	Reasons for Dissatisfaction in the Functioning of Laboratory	290
109	Availability and Use of Computer Lab in Higher Secondary (N=264)	292
110	Physical Education training to HSS Students	293
111	Toilet Facilities to Higher Secondary Students	294
112	Shortcomings or Inadequacies of Toilets in HSS	294
113	Evaluation in HSS	296
114	Problems in Evaluation System	297
115	Availability of Teachers for Teaching and Guidance	298
116	Method of Teaching Adopted by HSS Teachers	299
117	Nature of Learning Activities Adopted in Higher Secondary Class	299
118	Audio Visual Aids Used by Teachers in Higher Secondary Classes	300
119	Teacher Pupil Relationship in Higher Secondary Schools	301
120	Counselor's Service in HSS	302
121	Organisation and Utilization of Various Training Programmes to HSS Students	302
122	HSS Students Membership in Various Clubs	303
123	Higher secondary school Text Book	305
124	Changes in the Working Hours of Higher Secondary School HSS Students	305
125	Difficulties Due to New Time Schedule	306
126	Utilisation of Saturday	307
127	Functioning of ASAP in Higher Secondary	308
128	Course Selection and Future Intention of Vocational Higher Secondary Students	320
129	Reasons for the Choice of Vocational Course	320
130	Future Intentions of Vocational Higher Secondary Students	322
131	Medium of Instruction in VHSS	324

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
132	Difficulties Due to Change in Medium of Instruction	324
133	Doubt Clarification by Vocational Higher Secondary Students	325
134	VHSS Library facilities	325
135	Method Used for Distribution of Library Books in Vocational Higher Secondary Schools	326
136	Constraints in Utilization of Library Facilities	327
137	Laboratory Facilities in Vocational Higher Secondary Schools (N= 313)	328
138	Difficulties in Utilizing Lab Facilities in Allotted Time	329
139	Reasons for Dissatisfaction in the Functioning of Lab	330
140	Availability and Utilization of Computer Lab in Vocational Higher Secondary (N=132)	331
141	Physical Education training to VHSS Students	332
142	Toilet Facilities to Vocational Higher Secondary Students	333
143	Inadequacies in toilet facilities	334
144	VHSS students Evaluation	335
145	Problems in Evaluation System	336
146	Availability of Teachers for Teaching and Guidance	337
147	Method of Teaching Adopted by VHSS Teachers	337
148	Learning Activities	339
149	Teaching Aids Used by Teachers in Vocational Higher Secondary Classes	340
150	Teacher Pupil Relationship in Vocational Higher Secondary Schools	340
151	Counselor's Service in Vocational Higher Secondary	341
152	Organisation and Utilization of Various Training Programmes for Vocational Higher Secondary Students	342
153	VHSS Students Participation in Various Clubs	342
154	VHSS Text Book	343

LIST OF FIGURES

<i>Figure No.</i>	<i>Title</i>	<i>Page No.</i>
1.	Organizational Chart of Higher Secondary Education in Kerala	56
2.	Organizational Chart of Vocational Higher Secondary Education in Kerala	75

LIST OF APPENDICES

Appendix	Title
I	List of Schools Selected for Data Collection
II	Questionnaire on Higher Secondary Education System for Higher Secondary Teachers
III	Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Teachers
IV	Questionnaire on Higher Secondary Education System for Higher Secondary Students
V	Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Students
VI	Observation Schedule on Facilities of Higher Secondary Schools
VII	Observation Schedule on Facilities of Vocational Higher Secondary Schools
VIII	Interview Schedule for Regional Deputy Director, HSE
IX	Interview Schedule for Higher Secondary Principal
X	Interview Schedule for Vocational Higher Secondary Principal
XI	Interview Schedule for ASAP Coordinator

Chapter I

INTRODUCTION

- *Need and Significance of the Study*
 - *Title of the Study*
 - *Definition of Key Terms*
 - *Objectives of the Study*
 - *Methodology in Brief*
 - *Scope and Limitations of the Study*
 - *Organisation of the Report*
-

INTRODUCTION

Human resource development has necessarily to be assigned a key role in any development strategy particularly in a country with a large population (Upadhyay, 2012). The level of prosperity, welfare and the security of masses depends upon the quality of persons who are coming out of our schools and colleges (Garg, 1974). The system of education prevailing in our country creates a new class of people who are trained to take up different professions in life (Patil & Patil, 1982).

The history of education in India began with teaching of traditional elements at early Hindu and Buddhist learning centers before the Common Era. In middle age Islamic education became ingrained with the establishment of the Islamic empires in India while the coming of Europeans later brought western education to colonial India (Upadhyay, 2012).

Education has to be related to the life, needs, and aspiration of the people so as to become a powerful instrument of social economic and cultural transformation (Biswas & Aggarwal, 1974). Education was one of the neglected items during the British time in India (Garg, 1975). Education commission 1964-66 states that in the post independence period, a major concern of the Government of India and of the state has been to give increasing attention to education as vital factor to national progress and security. The educational ideals and contents of present day education at different levels are the refined form of educational system existed in ancient period (Bharali, 2006).

2 HIGHER SECONDARY EDUCATION SYSTEM

Even before independence and especially thereafter a demand has slowly grown in all parts of the country that there should be a national system of education or at least a national policy with certain goal and basic programmes. The restructuring of the educational system uniformly throughout the country is a drastic revolution. Nehru stressed this idea in his inaugural address to the CIBE (1948) “great changes have taken place in the country and the education system must also be in keeping with them. The entire basis of education must be revolutionalised.” (Biswas & Aggarwal, 1974).

Since 1947 various commissions and committees on education have suggested radical changes in our education system but all in vain (Garg, 1975). After independence the India government paid due attention towards the education of masses in general and vocational education in particular. One of the principles laid down to promote the development of education in the country is the development of uniform educational structure of 10+2+3 in all parts of the country.

The report of the National Committee on 10+2+3 educational structure (1973) crystallized the report of the committee on emotional integration (1962), report of education commission (1964-66), report of committee of members of parliament on education (1967) and all the expert thinking on the subject new pattern and provides guidance material for its implementation.

The 10+2+3 pattern have been born out of the deliberations and discussions of various committees, conferences, and commissions before and after independence. The CIBE in its last meeting held in 1972 reiterated its

earlier recommendation adopting uniform pattern 10+2+3 and urged that it should be implemented in all parts of the country by the end of fifth plan.

The new pattern of education was finally approved by NCERT and in turn by the Government of India in 1975. The pattern also accepted by all states and introduced in the state board of secondary education along with CBSE.

Kerala is unique in terms of its educational development. It was proposed that the pattern of education throughout the country would be 10+2+3 i.e. the 10+2+3 structure has now been accepted in all parts of the country including Kerala after much discussion. The pre degree education in Kerala, from the very beginning had been a part of university education. Prior to the introduction of higher secondary education, the plus two stage of education existed in the name of intermediate education and was exclusively a part of collegiate education. There was a partial induction of plus two stage of education in the school system with the introduction of vocational higher secondary course in nineteen schools in 1983-84.

In order to reorganize the secondary and college education on the basis of the National Educational Policy (NPE, 1986), the pre-degree course was gradually de-linked from the higher education system and was brought under the school system. Govt. of Kerala had decided to reorganize secondary and collegiate education in the state in accordance with NPE,1986 and order in this regard were issued on 23/3/1990 as per GO (MS) No 76/90/H.Edn. Higher secondary education was started in the state in 1990 abolishing pre degree courses in the colleges during the academic year 1990-91 as per GO

4 HIGHER SECONDARY EDUCATION SYSTEM

(MS) No: 91/90/GI Edn.Dt:23/05/1990 by plus two/higher secondary education in selected government schools in the state. It was specified in the government order that the scheme will be extended stage by stage to other high schools in the state after watching the progress of higher secondary education for one year. In 1990, the pre-degree course was continued to be controlled by the universities (Government of India, 1990) and plus two was introduced only in selected government schools in the state. After watching the progress of plus two education for one year, the scheme was extended, stage by stage, to other high schools in the state.

Vocational Higher Secondary Education was introduced in the state in 1983-84 in 19 Government High Schools. Vocational Higher Secondary Education in the state imparts education at higher secondary level aiming to achieve self/wages/direct employment as well as vertical mobility. The course was designed to prepare skilled work force in middle level in one or more group of occupations, trade or job after matriculation at 10+2 stage of education.

Need and Significance of the Study

In order to reorganize the secondary and college education on the basis of the National Education Policy (NPE), the pre-degree course was gradually de-linked from the higher education system and was brought under the school system. Being aware of the importance of gradual de-linking from higher education DHSE has implemented a number of initiatives. In the beginning, higher secondary was implemented in a few selected high schools and gradually expanded. A critical assessment of the system will definitely throw

light on both the strength and weakness of the programme and provide adequate guidelines for making the programme more effective and significant. This study attempted to throw light on the present position of higher secondary education to identify the issues and the future tasks to be undertaken. Review of related literature on education system reveals that there is dearth of studies related to higher secondary education system in Kerala.

It is on the basis of recommendations of various committees and commissions, government of Kerala has introduced higher secondary in a phased manner from the academic year 1983-84 for Vocational Higher Secondary Education (VHSE) and from 1990-91 onwards Higher Secondary Education (HSE). In the beginning it was implemented in a few selected schools and gradually expanded. In this study the investigator try to answer to what extent the system succeeded in realizing the objectives.

In the year 1983-84, Kerala government sanctioned vocational higher secondary and from the year 1990-91 government sanctioned higher secondary schools in government and aided sectors. In this study the researcher wanted to trace the growth and development, organizational structure, and pattern of courses at higher secondary level in Kerala.

Higher secondary is an important level in the hierarchy of education in Kerala. An effective education at the higher secondary stage is directly linked with the fulfillment of job and vocational requirement of the youth. Literature regarding education system is plenty across the nation. Studies related to other levels of education are numerous in India. Findings of the research studies conducted in Kerala regarding quality of higher secondary education

6 HIGHER SECONDARY EDUCATION SYSTEM

shows mixed results. In this context the investigator thought it is essential to assess the higher secondary education system in the state. Hence the present study was designed.

Banergee and Mukergee (1962) found out the facilities for study and work, that were made available to students and teachers were inadequate and unsatisfactory. Bose (1965) found that library facilities were very poor in many of the schools and regular periodical examinations were not much stressed. Pal (1967) reported that teachers entered the profession with favorable attitude towards teaching, but later on the circumstances, the service condition and the other factors contributed to their frustration and dissatisfaction. Gupta (1967) proved that administrative load of work of principals was heavy because of lack of helping hands and interference of managers and provision for co-curricular activities was not satisfactory. Kamalamma (1969) found that very few teachers have taken advantage of refresher courses and in-service training and the head masters in government schools did not favor the idea of participation in school administration. Arunjatal (1979) found that the work load of head of the institution was about eight and half hours per day with teaching and correction work which was roughly one third that of a graduate teacher. Hosseini (1990) suggested the need for providing adequate facilities of every kind so that students develop their innate powers. Modak (1994) found that non-availability of efficient teachers, surrounding of the school/Institution and financial stringency are some of the reasons of non achievement of vocationalisation of education. Anil (2000) reported that majority of teachers and principals are unsatisfied with the present condition of higher secondary education system. Gopakumar

(2000) found out that the most of the schools lack convenient buildings, suitable equipment and laboratory facilities. Infrastructural facilities available in the Vocational higher secondary schools are not at all satisfactory. Palliyalil (2004) revealed that the facilities available for physical education in the secondary and higher secondary schools of Kerala are inadequate to run a sound programme. There is no post of physical education teachers in higher secondary section.

Sethumadhavan (2005) found out that, infrastructural and academic facilities do not indicate a high degree of satisfaction for students and teachers. Teachers and students reported the present evaluation procedure and follow up are not appropriate. Existing vocational courses are effective for the intellectual development of the students and the existing vocational courses help to develop imagination and basic values in students (Rajagopalan, 2006). Need of the hour is to satisfy various stake holders, its teachers, students, employers etc. (Kansal, 2007). Existing classroom facilities in many of the school are not impressive (Ramadevi, 2008). Teachers should sustain their attitude for the positive development in the students rather than the acquisition of bookish information (Kumar & Astalin, 2011). Physical exercises such as walking, jogging, swimming, playing etc. are good methods of overcoming stress in students (Babu 2012). Higher secondary school students who are a major in the basic pillar of the educational system of India need to be provided all kind of support from the family, school, society and the nation, to establish a strong community bond desirable for the progress of human kind (Mohamedayupkhan & Mani, 2012). The resource collections in the school libraries are not qualitatively and quantitatively adequate to fulfill

8 HIGHER SECONDARY EDUCATION SYSTEM

the demands students (Choudhari & Sengupta, 2014). Aneeza (2015) found that the school may encourage group oriented activities in teaching-learning process and provide special care in collaborative learning. physical facilities are inadequate in most of the schools (Aneesh, 1999).

Various studies were conducted in the area of higher secondary level education, but a comprehensive study by incorporating both HSE and VHSE has not been attempted so far.

Higher secondary level education is crucial in many respects in the life of an individual, mainly because this level is considered as a turning point in their future life. Though the area is very vast investigator decided to conduct research on the topic as such a comprehensive study alone provide valuable outcomes regarding the higher secondary level education in the state of Kerala.

A critical study is the most appropriate to find out strength and weaknesses of the system, hence the investigator did a critical analysis. The nature of critical enquiry is done by approaching the same issue through diverse angles thus elucidating objective realities of the problem. In this study the researcher critically studied the higher secondary system in Kerala, by adopting various strategies to ensure critical analysis. The investigator analysed different dimensions of higher secondary education by collecting data from different sources, principals, RDD, teachers, students and coordinators of the sampled higher secondary schools.

This investigation is mainly intended to study the existing system of higher secondary education in Kerala and to come forward with suggestion

which could definitely be a guiding force to policy makers. This study will be an attempt to analyze the status of higher secondary education system in Kerala, it provide a basis for deciding the nature of improvement needed. HSE and VHSE are the two main streams of education in the state, and hence it is essential study in detail about both the system as a part of higher secondary level education.

Title of the Study

The study is entitled as: “**A CRITICAL STUDY OF HIGHER SECONDARY EDUCATION SYSTEM IN KERALA**”.

Definition of Key Terms

Critical Study

Involving the objective analysis and evaluation of an issue in order to form a judgement (Oxford Dictionary, 2017). In this research critical study stands for analyzing various aspects of higher secondary education system with respect to administration, organization and functioning of higher secondary level education in Kerala.

Higher Secondary Education System

In this study, higher secondary education system refers to level of education system in which Students studying in standard XI and standard XII classes of any of the state recognized institutions of the state of Kerala, under the streams HSE and VHSE.

Kerala

Kerala is one of the states in Indian union which is situated south western part constituted under the State Re organization Act of 1956, by uniting Travancore, Cochin and Malabar on 1st November 1956.

Objectives of the Study

1. To study the structure of course, subject combination, and infrastructural facilities in Higher secondary and Vocational higher secondary education in Kerala.
2. To study academic aspects of higher secondary and Vocational higher secondary education in Kerala.
3. To study administrative aspects of higher secondary and Vocational higher secondary education in Kerala.
4. To identify the major problems existing in higher secondary and vocational higher secondary education system in Kerala

Methodology in Brief

Design of the Study

The purpose of the present study was to critically analyze the higher secondary education system in Kerala. So an indepth investigation was needed for fulfilling the objectives. Data was collected from different sources for this purpose. Hence, the study came under the design of mixed type research. Higher secondary level education in the state has two streams such as higher secondary and vocal higher secondary. Document analysis was done extensively to trace out the historical development of higher secondary

level education. A survey was conducted with students, teachers, and principals as major sample from both HSS and VHSS. Diary method, was also used for collecting longitudinal data on daily activities of HSS and VHSS. Interview and observation were the techniques used for getting rich qualitative data required for the study. The data was analyzed using both quantitative and qualitative procedure.

Methods Used

In this study, the investigator used document analysis, survey, and diary as methods for collecting data. Since the study is dealt with the development of higher secondary education, the method adopted by the investigator involved analysis of documentary sources and recording of events and critical interpretation of the data collected. The study therefore concerned with description and analysis of the various documents on various aspects of higher secondary education in Kerala. Survey was conducted to gather opinion of principals, teachers, Regional Deputy Director (RDD) of Higher Secondary Education, Additional Skill Acquisition Programme (ASAP) coordinators, and students. Surveys were conducted using various tools such as questionnaire, interview schedules and observation schedules. Through diary method the researcher planned to gather data from teachers and students on; the daily activities in the school and to triangulate the data obtained through other methods. Three diaries were arranged for the study, one each for students on HSS and VHSS, and the other one with HSS teacher. Investigator was unable to identify a willing VHSS teacher to assign the duty of writing daily diary.

Sample

The data for the present study was collected from the selected higher secondary schools belonging to rural, urban, coastal and tribal areas. Hence the population of the sample includes all the higher secondary schools and vocational higher secondary schools in Kerala and students, teachers, coordinators and principals.

The sample of the study included Regional Deputy Director, Principals (HSE 67, VHSE 16), teachers (HSE 145, VHSE 37), students (HSE 715, VHSE 377) and ASAP coordinators (7).

The investigator took necessary care to ensure representation of the sample by giving adequate representation to gender, locality, age, qualification, teaching experience and type of management of institution.

Techniques Used for the Study

The techniques such as interview and observation were employed for the study.

Tools Used for the Study

In order to fulfill the objectives of the study the following tools were used for collecting data.

- i. Questionnaire on Higher Secondary Education System for Higher Secondary Teachers. (Anitha & Nath, 2014)
- ii. Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Teachers. (Anitha & Nath, 2014)

- iii. Questionnaire on Higher Secondary Education System for Higher Secondary Students (Anitha & Nath, 2014)
- iv. Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Students (Anitha & Nath, 2014)
- v. Interview schedule to Higher Secondary Principals (Anitha & Nath, 2014)
- vi. Interview schedule to Vocational Higher Secondary Principals (Anitha & Nath, 2014)
- vii. Interview schedule for RDD of higher secondary education
- viii. Interview schedule for ASAP coordinator
- ix. Observation schedule on Facilities in Higher Secondary Schools (Anitha & Nath, 2014)
- x. Observation schedule on Facilities in Vocational Higher Secondary Schools (Anitha & Nath, 2014)
- xi. Diaries for HSS & VHSS Students and HSS teacher.

Along with various tools and techniques the investigator relied on various documents and other sources to supplement the data.

Technique of Analysis

In this study the investigator made use of percentage analysis for the analysis data collected through questionnaires and interview with principals. The percentage analysis helped the investigator to make an analysis of the response of principals, teachers and students of higher secondary and

vocational higher secondary schools. The investigator used verbal description for thematic analysis of qualitative data collected through documents, diaries and interview schedule to ASAP coordinators.

Scope and Limitations of the Study

Scope of the Study

The present study, critical analysis of higher secondary education system in Kerala is a comprehensive study on higher secondary level education of the state. The higher secondary level is considered as the turning point in the future education, vocation/profession and life of an individual, and hence, it is highly crucial to have such an extensive study. The two major streams of education at higher secondary level such as HSE & VHSE are together taken for the study. The stakeholders of the higher secondary level education are students, teachers, principals, and administrators. The investigator collected data from all the major stakeholders of both HSE and VHSE. Various primary and secondary sources were analysed for the study along with direct observation by the investigator ensure the reliability of the data. Diary method was the unique method adopted to gather longitudinal data regarding daily academic and other activities at higher secondary level enhances the credibility of the study. The data gathered using different tools of each stream was subjected to triangulation to establish the validity and comprehensiveness of the findings of the investigation. As the study explore many serious problems exist at higher secondary level education and sort out suggestions from various stakeholders to solve such issues is also expected to enhance the scope of this research.

Limitations of the Study

With a vast topic of this nature the researcher is forced to limit the scope of research to the following aspects:

1. The area for data collection is limited to four districts in Kerala namely, Palakkad, Malappuram, Kozhikode and Wayanad.
2. Only twelve out of thirty five vocational courses are included in the study.
3. Only representative sample is taken from higher secondary and vocational higher secondary schools in Kerala.
4. Higher secondary education system under national open school and CBSE were not included in the study.

Despite of all these limitations every effort has been made to make sure that this study would revealing a clear picture of higher secondary education system in Kerala. This study is expected to help the policy makers, authorities and educationists to root out the defects of the higher secondary system and make sure that the system yield desired result.

Organisation of the Report

The report consists of five chapters. Chapter 1 presents the needs and significance of the study, statement of the problem, objectives of the study, a brief summary of methodology, and scope and limitations of the study.

Historical Overview and Review of related literature is presented in Chapter 2. First section of the chapter gives the historical background of higher secondary education system, its growth and development, recommendations of

various committees and commissions related to higher secondary education system and second section consists the compilation of studies reviewed.

Chapter 3 gives methodological procedure adopted for the study including design, methods of study, selection of sample, tools used, data collection procedure, and techniques used for analysis are described.

Chapter 4 presents the details of the analysis and interpretation of the obtained data.

Chapter 5 provided description of summary of procedure, major findings, conclusions, educational implications, and suggestions for further research to be carried out.

Chapter II

**HISTORICAL OVERVIEW
&
REVIEW OF RELATED STUDIES**

- *Historical Overview of Higher Secondary Education System in Kerala*
 - *Review of Related Studies*
 - *Conclusion*
-

HISTORICAL OVERVIEW AND REVIEW OF RELATED STUDIES

This chapter has two sections. Section I deals with historical overview of higher secondary education and section II deals with compilation of studies reviewed for the present investigation.

Section I

Historical Overview of Higher Secondary Education System in Kerala

Higher Secondary Education System

This section devoted to create a background for making a study about the higher secondary schools in Kerala. This has been accomplished, by including a brief history about education system in India, various committees and commissions, higher secondary education in Kerala particularly, the present scenario of the higher secondary school education, the evolution of the higher secondary section popularly known as the 'plus two', the legal and administrative framework concerning the higher secondary schools important activities and programmes at higher secondary level and a brief analysis on different dimensions of the higher secondary and vocational higher secondary schools, such as, the growth in the number of schools, number of teachers, enrollment, quantitative assessment of the result of plus two examinations and initiatives of the state government for improving higher secondary system in Kerala.

Great many changes were taken place during the past years and several experiments were conducted in the educational system of India. An

educational system is shaped by the larger fabric of a culture of a particular society at a particular time. The culture of a society means the set of customs, the ideas and the ideals held and cherished by the society: the pattern of education developed and had been changing in the changing society (Bharali,2006). The educational ideals and contents of present day at different levels are the refined form of education system existed in ancient period. Reforms in education system were made in each period.

The end of Victoria era: - Education in India under British Govt., “says Howell, was first ignored, then violently and successfully opposed, then conducted on a system now universally admitted to be erroneous and finally placed on its present footing.”By this Howell refers to the ideals and methods advocated in the despatch of 1854 which practically dominated the situation till 1901-02.

The number of secondary institution has gone up considerably during the last twenty years of independence. If we review the progress of secondary education since independence, two main features come to the forefront. Hitherto, we had been having a ten year school course known as high school or matriculation followed by the two year intermediate and the two year graduate course. Naturally the entire system was monotrack and transfer from one stage to the other was automatic and perhaps inevitable.

The idea of present system of higher secondary education first developed about hundred years ago, as mentioned in the report of Calcutta university commission of 1917-19 and other various deliberations. The commissions, conferences and meetings held from time to time recommended for restructuring of education of higher secondary level includes Saddler

commission, education commission, planning commission, vice chancellors conference, Kothari commission etc.

The 10+2+3 Pattern of Education

During the decade 1966-76 the phrase “ten plus two plus three” dominated several formal as well as informal discussions. Even common people talked about it because it referred to as a major educational reform after independence (Chauhan, 2004). The structure of education in India is spread over a period of about twenty years divided into stages in a hierarchical order from primary to university and with increased degree of selectivity. The 10+2+3 structure indicates three terminal points giving opportunities to students at each point to decide the next course of action and make proper educational decisions on the basis of interest abilities and aptitude of students.

Till the end of nineteenth century the schools were under the control of the universities and the matriculation examination was conducted by the Universities. It originated from the Calcutta university commission of 1917-19 (Sadler Commission), which recommended the introduction of intermediate colleges to prepare students for college education and detachment of two years from college education to form a separate intermediate stage. The committee recommended that the dividing line between the university and secondary course more popularly drawn at the intermediate examination rather than at the matriculation (Biswas & Aggarwal, 1974). Period in between the Sadler Commission and the independence recorded several recommendations for the benefit of the society. The Radhakrishnan/ Indian University Commission of 1948-49 repeated the idea of 10 + 2 + 3 pattern contained in Calcutta

University commission. The Secondary Education Commission headed by Dr. Lakshmanaswami Muthaliar explicated the importance of secondary education. At the time of Kothari commission 1964-66 there were four patterns in educational structure in the country. The commission therefore emphasized the necessity of introduction of a uniform educational structure of 10+2+3. The 10+2+3 pattern was first proposed by this Commission. Teachers, students, and various educational bodies in the country accepted this pattern. The National Policy on Education, 1986 approved this pattern. The Government of India also recommended the introduction of this uniform educational structure .After ten years “the plus two” year education was for those students who wanted to continue their education further (Sharma, 2002). During the plus two year education the emphasis was laid on vocational and academic courses (Sharma, 2001)

In this chapter a brief outline of the evaluation of higher secondary education are given. A brief outline of higher secondary education in India and recommendations of various education commissions are also mentioned. The recommendations of these commissions gave us what is known today as the higher secondary system.

Saddler Commission (1917-19)

Govt. of India appointed this commission to inquire in to the condition and prospects of Calcutta University with Dr. Michael Sadler as chairman. Those days, matriculation examination, which marked as the end of school stage and constituted an entrance examination to the universities, was conducted by the universities. After two years, another public examination was held which was called intermediate examination. This was followed by

the first degree examination. (Chauhan, 2004). The problem was studied by the commission in depth. The commission recommended that the duration of school education be increased by two years by shifting the intermediate stage to school stage. It was the first commission to suggest for making the duration of school education to twelve years and to put forth the idea of restructuring of education in the shape of 10+2+3. The commission said that the dividing line between the university and the secondary courses was more appropriately drawn at the intermediate examination than at the matriculation examination. Consequent on the recommendations, intermediate colleges came to be established throughout the country and two years intermediate education came to stay in the country. Also Boards of intermediate education came to be founded in many states.

University Education Commission (1948-49)

This commission examined the problems from all angles and recommended for adoption of a uniform pattern of 10 + 2 + 3 for the entire country. The commission emphasized to continue 12 years schooling including two year intermediate education and to introduce vocational based course in order to divert students in different walks of life at the end of school stage with a view to reduce pressure on university admission.

Secondary Education Commission (1952-53)

Secondary education commission recommended for a new educational structure of 8 + 3 + 3 i.e. 8years of general education, 3 years of higher secondary education, and 3 years of first degree course. For high school students one year pre university course was recommended to enable them to enter higher education.

Planning Commission (1960)

The panel of education constituted by the planning commission in 1960 recommended that, duration of school course should be 12 years so that the total span of education from primary to higher education should be 15 years (12 + 3) as it felt desirable that mature students of the age of 18 years should go to the university.

Vice Chancellors Conference (1961)

The third conference of vice chancellors of Indian universities in 1961 suggested that the period of school education should not be less than 12 years and the degree course should be for a period of 3 years.

Central advisory board of education meeting (1962)

This meeting strongly favored to have 15 years of education before going to university. It consists of 12 years of school education up to the higher secondary level and three years of first degree course.

Kothari Commission (1964-66)

Kothari commission critically disagreed with the recommendation of secondary education commission (i.e. for a new educational structure of 8+3+3) and endorsed 10+2+3 pattern of education.

National Policy of Education /NPE (1968)

The NPE 1968 stressed the need for increasing facilities for technical and vocational education for increasing employment opportunities. Introduction of vocational education at +2 stage help to remove gap between white and blue color jobs by taking the students from education to work.

Committee on 10 + 2 + 3 Structure (1973)

This committee recommended that the curriculum of higher secondary stage should provide for two streams viz., academic stream and vocational stream. As a result of the report of the committee a beginning was made by the CBSE, Delhi, to introduce 10+2+3 pattern in some of the schools affiliated to it.

National Policy on Education / NPE (1986)

The NPE 1986 has formulated to introduce a national system of education with a common educational structure for the whole country. The new policy of 1986 clearly recommended the +2 stage or senior secondary education to be properly belongs to school education and those institutions which are at present offering +2 stage of education must transfer these classes to the schools.

The entire scheme and the pattern of 10+2+3 have been born out of the deliberation and discussions of numerous committees, conferences, and commissions during last forty year. The new pattern of education was finally approved by NCERT and in turn by the Government of India in 1975. The pattern also accepted by all states and introduced in the State's Board of Secondary Education along with the CBSE.

Higher Secondary Education in Kerala

Kerala is known for its efforts in universalizing school education. From the beginning of 19th century, education has taken the centre stage of the social revolution and all the communities tried their best to educate their

wards by setting up schools and spreading the message of importance of education. Post independent times, the efforts were more streamlined with the support of the state government.

Milestones in the History of Education in Kerala

In the ancient period the structure of education is a three tier structure consisting of Lower elementary (1 to 4), Higher elementary (5 to 7), and secondary (8 - 10). After fifth class a student can join in another education system named as first forum. After joining first forum a student can continue up to sixth forum. English language learning got prominence during this period. The curriculum consists of higher level mathematics, science, history of Travancore and Cochin, and British history. After completing eleven years of education successfully the student got SSLC certificate. This certificate was issued by then madras Government.

Establishment of Indian universities is the turning point for higher education in India. In 1857 Universities were started in Bengal, Mumbai and Madras provinces. For awarding Degree they followed the model of London University. The first step of higher learning is the First examination in Arts (FA), First examination in Law (FL). These are the initial stage of higher learning. FA course is the intermediate course in between school education and University education.

FA course consisted of two subject combinations such as Science group (general science, mathematics, Biology), and Humanities group (History, logic, and Civics). First language of FA course is English and any regional Indian language is considered as second language. In 1866 first FA

course in Kerala was started in Maharajas free school (University College) in Trivandrum. In 1968 the first FA examination was conducted. In private sector FA course was started in Kottayam and Nagarkoil. In Kochi FA course was started in Maharajas school (Maharajas College) under government ownership. In unaided sector FA course was started in St. Thomas school (Thrissur) and St. Therasas School (Ernakulam). In Malabar FA course was started in Rate school (Victoria College, Palakkad), Brennan school (Brennan College, Thalasseri), BEM school and Zamorine's School (Guruvayoorappan college) (Kozhikkode).

In 1905 onwards FA course was renamed as intermediate course. No change in duration and subject being taught. From the beginning of the second courter of twentieth century the issue was to make the intermediate course as a part of the college or school education. One of the important suggestion in this regard was given by Surggent Commission (1944). One of the important suggestion of Surggent Commission is to stop the intermediate course and the first year intermediate course should be included in school education and the second year is included as a part of college education (previous examination). This previous examination in college is changed in to Pre university course. Intermediate course was existed more than fifty years. In 1957 Kerala Govt. stopped this course. These suggestions are modified and presented by Dr Kothari.

Papworth Committee (1945)

In Kerala a committee is constituted under the chairman ship of Harold D Papworth (PVC of Travancore University). This committee suggested the structure of education in Kerala consists of five stages, such as School

education (11 years), Pre university (1 Year), BA or B sc (3 years), honors (3 years), and MA or MSc (2 years).

In 1946- 47 Papworth committees recommendations were implemented in Kerala through a Gazette notification. Accordingly the first PU Course started in Intermediate college, Thaikkatt (TVM). During this period NSS and SNDP also started this course. Due to various reasons PU Course did not existed for long time.

Structural Change

EMS government stopped the intermediate course and Pre university course was started in its place. This government stopped the honors course. The introduction of pre university course created problems in Kerala education system. A student has to start intermediate course after eleven years of school education. This created two types of problems. In Travancore and Cochin region the students who complete lower elementary will join in the first forum. When they reach sixth forum and complete annual exam, the final school exam will be completed. After this they got SSLC certificate. Thus a student has to learn ten years. Then two more years of intermediate course makes a student to learn total twelve years. In Mudhaliar commission it was suggested that the first year of intermediate course is to be linked with school classes. Second year of intermediate course is to be continued as pre university course in the college itself. But the issues raised head in Kerala when these suggestions made practical.

School education continued as ten years. Eleventh class was not started in any school. One year pre university course was begun. Thus a student who

completes sixteen years joins for degree course. In other states school education consisted of eleven years. Another issue is related with academic aspects with regard to reduction of two years course contents in to one year. At that time it is impractical to start eleventh class in all high schools. So it leads to changing the duration of pre university course in to two year. But at this time this course was completely stopped at national level. It leads to starting of two years pre degree course in Kerala. In the initial stage (EMS Government) gave priority to government sector in higher education. But during the period of R Shankar (Chief Minister) aided sector got prominence. So in 1964 it was decided to start Pre degree course in Kerala. (Total colleges allowed was 42 among them 22 hold by Christian missionaries).

The pre degree education in Kerala, from the very beginning had been a part of university education. Prior to the introduction of higher secondary education, the higher secondary stage of education existed in the name of intermediate education and was exclusively a part of collegiate education. The process of delinking and attaching it to the school system was started during 1990-91 and completed within a decade.

Development of higher secondary education was not a sudden phenomenon. It could be attributed to the gradual and continuous efforts over a long period of time. In Kerala, the higher secondary education was a part of the higher education system and the two year classes were offered as pre-degree courses in arts and science colleges. In order to reorganize the secondary and college education on the basis of the National Educational Policy (NEP), the pre-degree course was gradually de-linked from the higher education system and was brought under the school system. Govt. of Kerala

had decided to reorganize secondary and collegiate education in the state in accordance with NPE 1986 and order in this regard were issued on 23/3/1990 as per GO (MS) No 76/90/H.Edn. Higher secondary education was started in the state in 1990 abolishing pre degree courses in the colleges during the academic year 1990-91 as per GO (MS)No: 91/90/GI Edn.Dt:23/05/1990 by plus two or higher secondary education in selected government schools in the state. It was specified in the government order that the scheme will be extended stage by stage to other high schools in the state after watching the progress of higher secondary education for one year. In 1990, the pre-degree course was continued to be controlled by the universities (Government of India, 1990) and plus two was introduced only in selected government schools in the state. After watching the progress of plus two education for one year, the scheme was extended, stage by stage, to other high schools in the state. The school system was streamlined by fixing standards 1 to 4 as lower primary, 5 to 7 as upper primary and 8 to 10 as secondary. Higher secondary education consists of standards XI and XII.

Discussions about Kerala Higher Secondary System

The topic about higher secondary education was first discussed in inter university consultative committee in 1986. All vice chancellors of universities in Kerala were members of this committee. It was Dr. M V Pylee the then vice chancellor of Cochin University, who presented this topic and got support of other members of the committee. The Vice chancellor of Kerala University was against it. So because of the opposition from the part of Kerala University, the committee could not take any decision. The causes of opposition from VC of Kerala university were:-

- They were getting a huge amount from the pre degree examination.
- They had to face severe opposition from non teaching staff (Pylee, 1998).

After two years there were efforts to remove Pre degree from colleges and add it to the schools. It failed because of the opposition from the people, teachers, and political parties.

There were recommendations in favor of pre degree board from Justice M P Menon Commission and Adiseshiyya Commission. Supreme Court (1985) also pointed out the need of Pre degree examination based on general policy of education. Under these circumstances the need of pre degree examination was put forward by the State Planning Board. The basic reasons put forward by the board includes:-

- Since pre-degree course is essential for the entire degree course, if a general policy was established there would be a general character for the pre degree examination in all the three affiliated universities. So it would be easy to select the students for higher education.
- It would be possible for the pre degree board to handle the pre degree examination which was a difficult task for the universities.
- It would be possible to publish examination result throughout the state in a single day.
- Valuation would be easy under a board.
- There won't be any need of entrance test for MBBS, engineering etc.
- As far as universities are concerned they can reduce their overburden and improve the qualities of degree and PG examination (Pylee, 1998).

By 1980 all the states in India implemented the 10+2+3 system as the Kothari Commission recommended. But it was not introduced in Kerala during that time. This became a strong handicap and the state became alienated from the other states in India. The outcome of this was that the value of higher education has gone down. This made people in the state to believe that Pre degree should be detached from Universities.

Government of Kerala on ninth march 1990 decided that Pre degree from the universities in Kerala should be delinked. The introduction of Higher Secondary education was a distinctive stage in the history of education in Kerala.

Romanus Horo Commission

The Government of Kerala appointed a commission under the chairmanship of Sri Romanus Horo IAS. The Commission recommended for start the senior secondary course with certain instruction in the Kerala state. Based on the recommendation of commission, Government of Kerala decided to start senior secondary courses as a big educational revolution in Government sector. The senior secondary course was later renamed as higher secondary course.

In 1990, the pre-degree course was continued to be controlled by the universities (Government of India, 1990) and plus two was introduced only in selected government schools in the state. After watching the progress of plus 2 education for one year, the scheme was extended, stage by stage, to other high schools in the state (Sukumar, 2013).

As an initial step Government had planned to start 31 plus two government schools each in one educational district and of which 15 were

humanities group and 16 science group schools. The strength on one was 60 students. In one school there would be one batch either science or humanities with the syllabus recognized by NCERT. But the second language syllabus of Pre degree run by the University of Calicut was opted by the Commission for this course. While considering the school time, it will be six days in a week except second Saturday from 9.30 AM to 4.15 PM. The total period will be 47 relaxing one period on Friday. Now the higher secondary school working time changed in Kerala as per the recommendation of Lambba Committee report.

Expert Panel Committee

The government of Kerala appointed an Expert Panel committee in the year 1995. The committee had recommended a two phase expansion of plus two schools in Kerala. It was proposed that first phase could be implemented during the last year of eighth plan (1996-97) and second phase during the first year of ninth plan (1997-98).

Expert Committee on School Education

In spite of the high educational attainments in terms of literacy, enrolment, gender parity in educational indicators, school infrastructure etc., the quality of education has been deteriorating in Kerala since recent years (George & Ajith, 1999). In this context, as per the decision of 12th Board Meeting held on 14-05-2014, Kerala State Planning Board constituted an Expert Committee under the Chairmanship of Prof P O J Lebba for making recommendations for improving the school education system. This committee examined the various aspects of the quality of school education in the State

and submitted its report with several recommendations to improve the quality of school education.

The Committee met five times and several stakeholders meetings were held. The Committee submitted its recommendations in December, 2015 by addressing several aspects related to the quality of education. The important recommendations were made on (i) teaching, assessment and learning outcomes, (ii) recruitment of teachers, (iii) school governance, (v) school infrastructure and teaching materials, (vi) synchronization of different agencies, (vii) pre-school education, (viii) children with special needs, (viii) arts, crafts and physical education and (ix) approval and accreditation to schools

Kerala Government tried to complete the process of Pre degree delinking in a period of just 3 years. The committee made it clear that it required at least six years. During the second phase period Government sanctioned plus two in 102 Government schools and sanctioned 276 full time posts of teachers. There were predominantly four groups under Pre- degree system catering different combinations of the subjects. In the early years of Plus Two, these were replaced by Science, Humanities and Commerce. Later, different combinations were introduced. Every student, under going higher secondary course, has to study 6 subjects. English language is compulsory with any one of the second languages offered for higher secondary courses such as Malayalam, Hindi, Arabic, Sanskrit, Tamil, Urdu, Kannada, Syria, French, Russian, Latin and German and a combination of four subjects, depending on the stream selected. The syllabus, prescribed by CBSE and NCERT text books are followed for English, subjects under science, Humanities and Commerce groups, as well as, for Hindi (Government of Kerala).

Curriculum Reform at Higher Secondary Level in Kerala

Many National study reports as well as approaches, from the Dr. Radhakrishnan Commission Report (constituted soon after the independence), to the National Curriculum Framework 2005, have influenced the school curriculum revision in Kerala state. The National Curriculum Framework 2005 sowed the seeds for many reforms in the field of Indian education. Subsequently, NCERT prepared textbooks for various subjects based on NCF 2005. Later the, Kerala Curriculum Framework 2007 was formed and the curriculum upto high school level was revised. The Right to Education Act of 2009, Prof. P.O.J. Labba Committee Report related to Higher Secondary Education and Dr. P.K. Abdul Aziz Committee Report related to a comprehensive curriculum revision - all pointed towards the necessity of curriculum reform. “The curriculum, syllabus and textbooks being followed for more than five years should be revised and reformed urgently by SCERT.”-**Prof. P.O.J. Labba Committee**. “As a knowledge society, it is of paramount importance to basically restructure and reform the curriculum to face the challenges posed by the times.” **Dr. P.K. Abdul Aziz Committee**

Kerala School Curriculum 2013 (Approach Paper 2013)

In the initial stage, textbooks as per the Pre-degree syllabus of Calicut University and some of the NCERT textbooks were used for Higher Secondary Education. In the 1990s, a new curriculum with comprehensive changes in learning and pedagogy was introduced at the primary level. Based on this activity-based, process-oriented and learner-centered curriculum, Continuous and Comprehensive Evaluation (CCE) and grading system were implemented. Subsequently, this method was introduced at the Higher

Secondary level too. However, a comprehensive revision of curriculum had not been implemented at the higher secondary level, though textbooks for certain subjects, Sourcebooks and Edumates for all subjects were prepared by SCERT (approach paper 2013). Constructivism is the basis of Kerala school curriculum 2013. As a stepping stone to the higher education sector, the higher secondary curriculum must inculcate in the learner the ability to take his life forward wherever he is, after the completion of his higher secondary education. Now the higher secondary education in Kerala provides 46 course combinations.

Information and Communication Technology

Today information and communication technology has an important role in the construction and dissemination of knowledge. The immense possibilities of ICT can be used to transact any subject at the higher secondary level. Through this, it can also be ensured that learners acquire ICT skills. Virtual labs are very useful in situations where real and complex practical activities become impractical. Thus, classrooms go beyond smart rooms and rise to the level of laboratories. Learners can make use of facilities like video conferencing and social media to converse with eminent personalities related to each subject and explore the endless possibilities offered by the subjects.

Art Education

Tagore's opinion about arts is noteworthy: "Literature, music and the arts, all are necessary for the development and flowering of a student to form an integrated total personality." (Epathashala) All the art forms had the power

of rejuvenating the human mind. Art education at the higher secondary level aims to develop the creative skills acquired by the learner and to create in him a broader outlook about art and literature. Also an aptitude for higher studies and research in the field of arts has to be developed in them.

Health - Physical Education

According to the WHO report of 2011, a vast majority of our youth are afflicted with lifestyle diseases. According to the statistics of the Government of Kerala, in a physical fitness examination conducted among 16,28,943 students during 2008-2009 academic year, only less than 20 % of the students were found to have required fitness. Both these facts indicate the prevalence of an unhealthy social situation. The health-physical education envisioned in Kerala School Curriculum 2013 and initiated at the primary level, gets perfected at the higher secondary level only.

Work Education

The confluence of knowledge acquired through hearing, sight and work makes construction of knowledge possible in a learner. Work education is essential to integrate and develop emotional and cognitive domains. A work education integrated with the subjects of higher secondary curriculum will be more appropriate.

Inclusive Education

In the classroom, an atmosphere that is congenial to all learners without excluding any one must be created. In our schools there are two categories of students; one, who requires more consideration, help and

attention and the other, who requires normal help and attention. Only by addressing this can we ensure equitable quality education. Thus the school activities and infrastructure have to be scientifically organised to facilitate an inclusive education.

Administrative and Academic Control of Higher Secondary Education

Administrative control of higher secondary education is vested with Directorate of Higher Secondary Education after its establishment in October 1990. The academic control, especially the syllabus and curriculum construction, of higher secondary education is done by SCERT Kerala.

Activities and Programmes to Higher Secondary Students

The important activities and programmes organized by Directorate of Higher secondary Education in Kerala consist of Career guidance and adolescent counseling, souhrida club activities Additional Skill acquisition programme etc

Career Guidance and Adolescent Counselling Cell.

It is concerned with the objective of providing guidance to students to identify their strength and limitations so as to set the right goal in their career. The Career Guides or the teacher in charge in the schools helped the students to update on latest trends in career development. CG & ACC conduct classes on different subjects related to Career Guidance are conducted at schools.

Souhrida club.

Souhrida Club', the flagship programme of Career Guidance and Adolescent Counselling Cell of the Department of Higher Secondary Education Department (DHSE) for empowering and developing adolescents. An HSST from each School is the school level coordinator of Souhrida. Two students from each class should be selected as class conveners of Souhrida club. In the case of co educational school class level coordinators are selected by giving equal representation to boys and girls. From class conveners two school conveners are selected. Principal should arrange the facilities for conducting activities of CG & ACC and Souhrida. In 2016 Life skill is the thrust area of souhrida and it imparts the lessons of Life Skill to all Higher Secondary Students.

Drop box, Amma ariyan and Know thy self are the major activities of Souhrida. Drop box system help the students to solve their grievances by putting their grievance in the drop box installed in the school. The complaints or grievances are secretly handled by the authorities and solve the concerned issues. In know thy self three classes are arranged for giving informations about the adolescent problems and anxieties. Amma ariyan programmes were organized for plus student's mothers for giving details about adolescent parenting.

CG & ACC at higher secondary school organized a number of programmes like Feminine power (Three eminent female personalities in the society talks are arranged for inspiring girls students)

Focus Points (Help Desks).

Focus Point functioned for one week from the date of issuance of application forms for +1 class of the Single Window Scheme for solving admission issues and helping in the admission process

Karuthu –Training on Self-Defense for Higher Secondary Girl Students.

Provide self defense training to higher secondary girls' students through the development of physical, social and mental health of the students.

FEAST–(Future Empowerment of Adolescent Students) Path Finder Programme.

FEAST imparts a direction about higher education and employment opportunities to higher secondary students in Kerala.

Path Finder Programme.

It identifies skills and enhance skills like communication, current affair knowledge, and to bridge the gaps in the acquired and required knowledge

Road Safety Education in Association with NATPAC in Higher Secondary Schools of Kerala State.

It provide training on road safety to higher secondary students.

Quality Improvement Programme- 'Snehapoorvam'.

This programme implemented to improve the academic performance of academically backward higher secondary schools in Kerala by giving extra care to those who got low result in plus one examination.

We help.

We help centers in each district provide relief to students from examination stress

SITAR.

SITAR provide artistic training to talented students in Saturdays and holidays.

Additional Skill Acquisition Programme-ASAP.

As per (Govt. Letter No. 3083/C1/2013/H. Edn dated 16.02.2013) Government of Kerala has initiated an ambitious programme, the Additional Skill Acquisition Programme (ASAP) with the objective of tackling the issue of growing unemployment in the State. The programme aims at equipping selected school/college students with skills in communication, IT and selected areas of industry and service sectors. At Level 1, ASAP imparts 300 hours of skill training to selected first year students (30 per batch, maximum two batches in an institution) outside the normal working hours. Of this 180 hours will be a foundation module comprising of communication skills and IT skills and the remaining 120 hours will be the module related to the skill sector chosen by the student.

Kalakshethra(2014-15).

Kalakshethra provide artistic training to artistically gifted and financially backward students through Kaalakshethra centers. This programme was started as a pilot phase in 2014-15.

WIFS– Weekly Iron Folic Acid Supplementation Programme.

As a part of government programme for all Adolescent Girls and Boys of classes 6th to 12th and for all out of School Adolescent Girls from age 10 to 19 years for reducing anemia in the adolescent population.

Adolescent Health Education Programme (AHEP).

Adolescent Health Education Programme (AHEP) aimed to equip every adolescent with scientific information, knowledge and life skills to protect themselves from HIV infection and manage their concerns pertaining to reproductive and sexual health.

Growth in Number of Schools

Higher secondary education development through economic reviews.

Higher Secondary Course is the turning point in the entire school education in the state of Kerala. The department serves as a professional institution in formulating and maintaining the standards of Higher Secondary Education and in providing need based timely, scientific, effective and sustainable services to the students and teachers at the Higher Secondary level. As a first step, during 1990 - 91, 31 government schools were upgraded to the status of higher secondary schools

Table 1

Higher Secondary Schools in Kerala (1990-2016)

No of Higher Secondary Schools in Kerala					Growth %
Year	Govt.	Aided	Unaided	Total	
1990-91	31			31	-
1991-92	49	34	3	86	177.42
1992-93	49	34	3	86	0.00
1993-94	49	33	2	84	-2.33
1994-95	49	33	8	90	7.14
1995-96	49	33	2(6 RS)	90	0.00
1996-97	150	34	8	192	113.33
1997-98	256	260	8	524	172.92
1998-99	256	260	12	528	0.76
1999-00	416	506	8(-4)	930	76.14
2000-01	416	508	8	932	0.22
2001-02	416	508	330	1254	34.55
2002-03	NA	--	--	--	NA
2003-04	702	523	340	1565	-
2004-05	702	523	431	1656	5.81
2005-06	699	524	441	1664	0.48
2006-07	729	529	439	1697	1.98
2007-08	735	529	439	1703	0.35
2008-09	735	529	439	1703	0.00
2009-10	760	686	461	1907	11.98
2010-11	760	686	461	1907	0.00
2011-12	755	668	413	1836	-3.72
2012-13	776	674	375	1825	-0.6
2013-14	831	831	384	2046	12.11
2014-15	832	850	389	2071	1.22
2015-16	833	854	386	2073	0.1

Source: Economic review various issues.

NA: Not Available

Table shows the year by year growth of higher secondary schools in Kerala starting from its origin on the basis of data available in economic review. The data for the year 2002 – 03 was not available. As per GO (MS) No 138/90/G Edn Dt: 27/06/1990 Govt. had introduced higher secondary course in thirty one Govt. high school belonging to 31 educational districts of the state with effect from the academic year 1990-91 by allotting science group with physics chemistry Maths and biology combination to sixteen schools and Humanities group with history geography, economics and political science combination to fifteen schools.

Higher secondary education was introduced in Kerala in 31 schools in 1990-91 and it extended to 55 schools during 1991-92. Out of the total 86 schools, 49 were Govt. schools, 34 aided and 3 unaided private schools. The annual intake of students increased from 3959 in 1991-92 to 8292 in 1992-93. There were 8450 students enrolled under +2 system of education during 1993. 9749 students enrolled under plus two during 1994.

During 1995-96 there were 84 higher secondary schools of which 22 are having science group and 27 humanities group. The 2 unaided schools have science group only. There were 11566 students 4987 boys and 6579 girls enrolled during this period. During this period Govt. have sanctioned 6 residential higher secondary schools for girls (in science group) under area intensive programme for educationally backward minorities, a centrally sponsored scheme with funds @ of Rs 15 lakhs per school.

In short, higher secondary schools were started first in 86 schools during 1990-92 period and has been remaining stagnant since 1997. Govt.'s decision in principle to delink PDC from colleges from 1997-98, 268 batches

of higher secondary courses were introduced in 112 Govt. high schools. Additional 61 batches were sanctioned in the earlier started schools. The students enrolled stood at 21850, of which 10450 were boys and 11400 girls in 1997.

In 1998 there were 524 schools of which 256 were Govt. schools, 260 aided schools, and 8 unaided schools. An analysis of the position would reflect that 260 aided schools have 423 science batches as against 324 science batches in 255 government schools.

During 1998-99, a total of 49 higher secondary schools were transferred to local bodies of which one was transferred to corporation, five schools to municipalities and 43 to district panchayath.

By the year 2000 there were 931 higher secondary schools, of which 417 were in Govt. sector 506 in aided sector and 8 in unaided sector. Four unaided higher secondary schools started as per directions of Hon'ble High Court during 1998 have been converted to aided higher secondary schools in 2000. A total of 3483 batches were introduced with 2003 – science batches, 759-Humanities, and 721- Commerce batches. Intakes of students were 58% in science, 22% in humanities, and 20% in commerce.

In 2001 there were 932 schools of which 416 in Govt. sector 508 in aided sector and 8 in unaided sector.

Pre degree was fully shifted from colleges only during ninth plan. It was during ninth plan a total of 842 higher secondary schools were started and thus at the end of ninth plan period there were 932 higher secondary schools of which 416 in Govt. sector, 508 in aided sector, and 8 in unaided

44 HIGHER SECONDARY EDUCATION SYSTEM

sector with an annual sanctioned intake of 174300 students. But the actual intake was 169000, which resulted 5000 vacant seats in 2002. During 2002-03, the first year of tenth plan, 322 higher secondary schools were sanctioned with one batch each in unaided sector thus the total number increased to 1254 of which 416 in Govt. sector, 508 in aided sector and 330 in unaided sector. In addition the number of batches rose to 3808 with a sanctioned intake capacity of 190400 students.

In 2004, 20% seats were additionally allowed to all the existing schools with a view to providing admission to the maximum number of SSLC pass outs. Again in 2004-05, 286 Govt. high schools were upgraded to higher secondary schools with two batches each.

In 2003-04 the actual enrollment was only 2.34 lakh as against the sanctioned seat strength of 2.60 lakhs which result 10% seats remained vacant.

During 2001-02 9000 teaching posts (3241-Govt., 5759-aided) and in 2002-03 two posts of lab assistants per school were created.

In the academic year 2001-02 private registration was introduced for higher secondary courses. In addition to this, Kerala state open school conducted by SCERT provide chance to SSLC pass out to opt science course through private study.

In 2004-05 there were 5493 batches with a sanctioned intake of 323445 students. During 2004-05 the number of admitted students was equal to the sanctioned seats. Sanction has been accorded by the Govt. for three regional centers of education at Trivandrum, Ernakulam and Kozhikode and

these have started functioning, a first step in administrative decentralization. From the academic year 2005-06 onwards grading system of evaluation has been started.

In 2007 there were 1697 higher secondary schools in the state, out of this 42.96% in Govt. sector, 31.17% in aided sector, and 25.87% in unaided sector. Out of 5804 batches science group has the maximum batch (57.46%) followed by commerce and humanities.

During 2008, 1703 higher secondary schools out of this 735(43.16%) Govt. schools, 529 (31.06%) aided schools, and the remaining 439 (25.78%) in unaided sector.

288149 students were admitted to higher secondary during 2008-09 out of this 50.09% were studying in Govt. schools, 35.77% in aided schools, and 14.14% in unaided schools.

In 2010 there were 1907 higher secondary schools in the state (39.86% Govt. schools, 35.97% aided schools, and 24.17% unaided schools).

There were 6449 batches for higher secondary courses in 2011. The total number of sanctioned seat in 1907 Higher Secondary Schools was 361440. 323560 students are admitted to the higher secondary schools in the state during the year 2010-11. Out of these 46.43% are studying in government schools, 143665(44.40%) students are studying in aided schools and the remaining 29664(9.17%) are studying in unaided schools.

In the State, 1836 Higher Secondary schools were functioning in 2012. Out of these 755 (41.2 per cent) are Government schools, 668 (36.4 per cent) are Aided schools and the remaining 413 (22.5 per cent) are Unaided schools.

Major Achievements in 2010-11

- All the Government/aided/unaided higher secondary teachers (23452 nos) were imparted 3-days content based comprehensive training programmes.
- Through the merit cum means scholarship programme, 9900 scholarships were distributed to the students of BPL families.
- Remedial coaching to 5333 students of 41 schools was imparted. This has resulted in a pass percentage between 50 and 98 percentage

1825 Higher Secondary schools were there in 2013 in the state. Out of these 776 (42.52 per cent) are Government schools, 674 (36.93 per cent) are Aided schools and the remaining 375(20.55 per cent) are Unaided and technical schools. There are 6264 batches for higher secondary courses in 2013. The total number of enrolment of students in Higher Secondary Schools was 355797 and it registered an increase of 7.92 per cent over the previous year.

2046 Higher Secondary schools were there in 2014 in the state. Out of these 831 (40.62%) are Government schools, 831 (40.62%) are Aided schools and the remaining 384 (18.76%) are Unaided and technical schools.

There were 2071 Higher Secondary Schools in 2015 in the State. Out of these, 832 (40.17%) are Government schools, 850 (41.04%) are Aided schools and the remaining 389(18.78%) are Unaided and technical schools.

There are 7237 batches of higher secondary classes in 2015. The enrolment in Higher Secondary Schools was 379880. Malappuram had the largest no of batches (1076) with an enrolment capacity of 53,129 students.

There were 2073 higher secondary schools in 2016 in the state .Out of these 833 (40.18%) are Govt. school, 854 (41.2%) are aided schools and the remaining 386 (18.62%) are unaided and technical school. There are 7248 batches of higher secondary classes in 2016. The enrolment in Higher Secondary Schools was 383582.

Growth, Structure, Courses and Development of HSS Education in Kerala

Higher secondary education was started in the state in 1990 as an initiative to abolish pre-degree course in the colleges during the academic year 1990-91 as per GO (MS) No: 91/90/GI Edn.Dt:23/05/1990 by starting higher secondary classes in the selected government schools in the state of Kerala. It was specified in the government order that the scheme will be extended stage by stage to other high schools in the state after watching the progress of plus two education for one year. Higher secondary students have to study 6 subjects. English language is compulsory with any one of the second languages offered for HSS courses such as Malayalam, Hindi, Arabic, Sanskrit, Tamil, Urdu, Kannada, Syria, French, Russian, Latin and German and a combination of four subjects, depending on the stream selected. In the initial stage, textbooks as per the Pre-degree syllabus of Calicut University and some of the NCERT textbooks were used for HSS Education. Now the HSS education in Kerala provides 46 course combinations.

As per GO (MS) No 138/90/G Edn Dt: 27/06/1990 Govt. had introduced HSS course in thirty one Govt. high school belonging to 31 educational districts of the state with effect from the academic year 1990-91 by allotting science group with physics chemistry Maths and biology

combination to sixteen schools and Humanities group with history geography, economics and political science combination to fifteen schools.

In Kerala, HSS education is now functioning under government, aided and unaided schools. As per the records of the Directorate of HSS education, there were 2073 HSS schools in 2016 in Kerala. Out of these 833 (40.18%) are Govt. school, 854 (41.2%) are aided schools and the remaining 386 (18.62%) are unaided and technical school. There are 7248 batches of HSS classes in 2016 with an enrollment of 383582 students.

HSS education in Kerala offers courses in three streams namely, science, humanities, and commerce with 45 subject combinations. Directorate of HSS Education conducts the various HSS examinations for students of Open School, Technical Schools, Kalamandalam Arts School, Schools in Lakshadweep, Mahe and Gulf Countries along with the students of the higher secondary schools in Kerala.

Admission Procedure

Government has successfully launched web based online admission procedure from the year 2009-10. The Single Window System (Ekajalakam) has succeeded in rendering Kerala Higher Secondary Plus One admission process simple and transparent and in ensuring social justice in it during the last eight years. It has been decided to conduct this year's admission process also in the Single Window method. Through this process, the state could ensure accuracy, social justice and transparency in the process of admission to Higher Secondary Schools. Since the process of admission was very transparent, maximum number of students could get admission to higher

secondary courses. Single window system has helped to fill 95.54% of seats of Higher Secondary Schools compared to 90% in 2007-08 and 80.84% in the year 2006-07 (Economic review 2009).

Single window system received CSI (Computer society of India) – Nihilent (International Consulting Company) Award 2009. CSI-Nihilent award given for four categories of e governance awards. The system received award under Govt. to citizen category. The system received National e-governance award 2009-10 From Central Govt. It was the second time the system received national award.

Table 2

Enrolment of Students in Higher Secondary Schools from 1990 -1996

Year	Boys	Girls	Total
1990-91	984	764	1748
1991-92	3247	2712	5959
1992-93	4276	4016	8292
1993-94	4315	4070	8385
1994-95	4378	5371	9749
1995-96	4987	6579	11566

Table shows the enrollment of students in higher secondary schools of the state from the year 1990-91 to 1995-96. During 1990-91 there were 1748 students enrolled under plus two system of education. There were 11566 students 4987 boys and 6579 girls enrolled during 1995-96 period. Therefore during 1995-96 period's annual enrollment rate showing approximately 6 times increases compared to 1990-91.

Table 3

Enrolment of Students in Higher Secondary Schools 2009-2016

Sl. No	Year	Govt.		Aided		Unaided		Total		Grand Total
		Male	Female	Male	Female	Male	Female	Male	Female	
1	2016	76844	87123	89009	99331	16973	14302	182826	200756	383582
2	2015	77437	86691	85201	96491	17852	16208	180490	199360	379880
3	2014	NA		--		--		--		NA
4	2013	72705	83761	73830	84098	21656	19747	168191	187606	355797
5	2012	69313	80110	69873	76671	17436	16271	156622	173052	329674
6	2011	150231(46.43)		143665(44.4)		29664(9.17)		NA		323560
7	2010	140204(48.12)		117216(40.23)		33931(11.65)		NA		291351
8	2009	144330(50.09)		103083(35.77)		40736(14.14)		NA		288149

Source: Economic review, various issues. Figures in parentheses represent percent to total.

N.A.: Not Available.

Table shows the enrolment of students in higher secondary schools of the state from the year 2009 to 2016. In 2009 there were 288149 students enrolled with the plus-two stage. Later in 2012 the enrolment increased to 329674 and thereafter to 383582 in 2015-16. Out of them 163967 were admitted in Govt. and 188340 were in aided and 31275 were admitted in unaided schools. In 2016 there were 383582 students enrolled to plus two stage. Out of them majority students belong to female category.

Table 4

No of Batches in Higher Secondary Schools in Kerala from 1991-2016

Year	Science	Humanities	Commerce	Total
2016	3731	1400	2117	7248
2015	3730	1400	2107	7237
2014	--	--	--	7214
2013	3412	1325	1527	6264
2012	2645	2834	1075	6554
2011	--	--	--	6449
2010	--	--	--	6053
2009	2427	955	1109	4491
2008	2427	955	1109	4491
2007	3335	1079	1390	5804
2006	--	--	--	5513
2005	3164	1005	1324	5493
2004	--	--	--	3483
2003	--	--	--	--
2002	--	--	--	3486
2001	--	--	--	3483
2000	2003	759	721	3483
1999	942	396	342	1680
1998	796	370	313	1479
1997	--	--	--	--
1996	--	--	--	--
1995	--	--	--	--
1994	50	34	--	--
1993	48	33	--	--
1992	--	--	--	--
1991	52	34	--	86

Source: Economic review, various issues.

In 1992 there are 86 batches in higher secondary school it was increased to 1479 in 1998. In 2005 the growth in number of batches is five times more than that of 1998. In 2016 the total number of batches in higher secondary was 7248.

Examination Result

Table 5

No. of Students Appeared and Passed in the Higher Secondary Examination (1991-92 to 1995-96)

Year	No of Students Appeared			No of Students Passed			% of pass
	Boys	Girls	Total	Boys	Girls	Total	
1996	3050	3595	6645	1211	2199	3410	51.32
1995	2504	2808	5312	1198	2215	3413	64.25
1994	2295	2650	4945	1206	2020	3226	65.24
1993	2229	1861	4090	1394	1125	2519	61.59
1992	829	815	1644	305	472	777	47.26

Source: Economic review, various issues.

Table shows the year wise examination result of higher secondary students in Kerala for the first five years. The pass percentages were 47.26, 61.59, 65.24, 64.25, and 51.32 respectively from the year 1991-92 to 1995-96.

Table 6

Pass % of HSS Students (1991-92 to 2016-17)

Year	Pass %
2017	83.37
2016	80.94
2015	83.96
2014	79.39
2013	81.34
2012	88.08
2011	81.58
2010	74.93
2009	76.46
2008	81.04
2007	72.36
2006	59.21
2005	59.88
2004	59.08
2003	59.25
2002	59.04
2001	57.67
2000	55.60
1999	58.88
1998	61.15
1997	55.41
1996	51.32
1995	64.25
1994	65.24
1993	61.59
1992	47.26

Source: Economic review, various issues.

Table shows the pass percentage of higher secondary students from 1991-92 to 2016-17. From 2005-06 academic year onwards grading system of evaluation has been started. After implementation of grading system the pass % of higher secondary students are showing above 70% every year. Now (2017) the pass % of higher secondary education was 83.37% while in 1992 it was 47.26%. 366139 school going regular students appeared for the Higher Secondary Examination, March 2017 from 2064 schools and 305262 became eligible for higher studies (EHS), the percentage of results for this year being 83.37, last year the percentage was 80.94 (DHSE Kerala).

Table 7

Number of SC Students Appeared and Passed in Higher Secondary Examination (2006- '07 to 2015-16)

Year	No of students appeared			No of students passed			%
	Boys	Girls	Total	Boys	Girls	Total	
2015-16	19567	21297	40864	9237	14371	23608	57.77
2014-15	19214	21475	40689	9952	14805	24757	60.84
2013-14	18288	20768	39056	9094	13280	22374	57.29
2012-13	15853	18811	34664	8762	12501	21263	61.34
2011-12	13158	16145	29303	9327	12781	22108	75.45
2010-11	12055	15219	27274	6581	9910	16491	60.46
2009-10	11589	15140	26729	5237	8342	13579	50.8
2008-09	12507	16024	28531	8127	11416	19543	68.5
2007-08	14019	15146	29165	6113	9165	15278	56.94
2006-07	10809	15505	26494	4752	7686	12438	47

Source: Economic review, various issues.

Table shows the pass percentage of Scheduled caste students appeared and passed in higher secondary examination from 2006-07 to 2015-16. It shows a marginal increase in the pass percentage of SC students performance.

Table 8

Number of ST Students Appeared and Passed in Higher Secondary Examination (2006- '07 to 2015-16)

Year	No of students appeared			No of students passed			%
	Boys	Girls	Total	Boys	Girls	Total	
2015-16	2559	2921	5480	1315	1870	3185	58.12
2014-15	2220	2636	4856	1220	1761	2981	61.39
2013-14	2189	2464	4653	1052	1520	2572	55.28
2012-13	1824	2161	3985	977	1362	2339	58.7
2011-12	1528	1936	3464	996	1453	2449	70.7
2010-11	1622	1947	3569	742	1125	1867	52.31
2009-10	1694	1899	3593	601	878	1479	41.16
2008-09	1577	1870	3447	927	1306	2233	64.78
2007-08	1525	1867	3392	646	1020	1666	49.12
2006-07	1333	1666	2999	499	704	1203	40

Source: Economic review, various issues.

Table indicates the pass percentage of ST students in higher secondary examination. In the year 2006-07 it was 40% but in the year 2015-16 it was 58%.

Table 9

Regional Deputy Director's Offices in Kerala

RDD Offices	Districts Covered
Trivandrum	Trivandrum, Kollam, Pathanamthitta
Kottayam	Kottayam, Alappuha, Idukki
Ernakulum	Ernakulum, Thrissur
Malappuram	Malappuram, Palakkad
Kozhikode	Kozhikode, Wayanad
Kannur	Kannur, Kazarkode

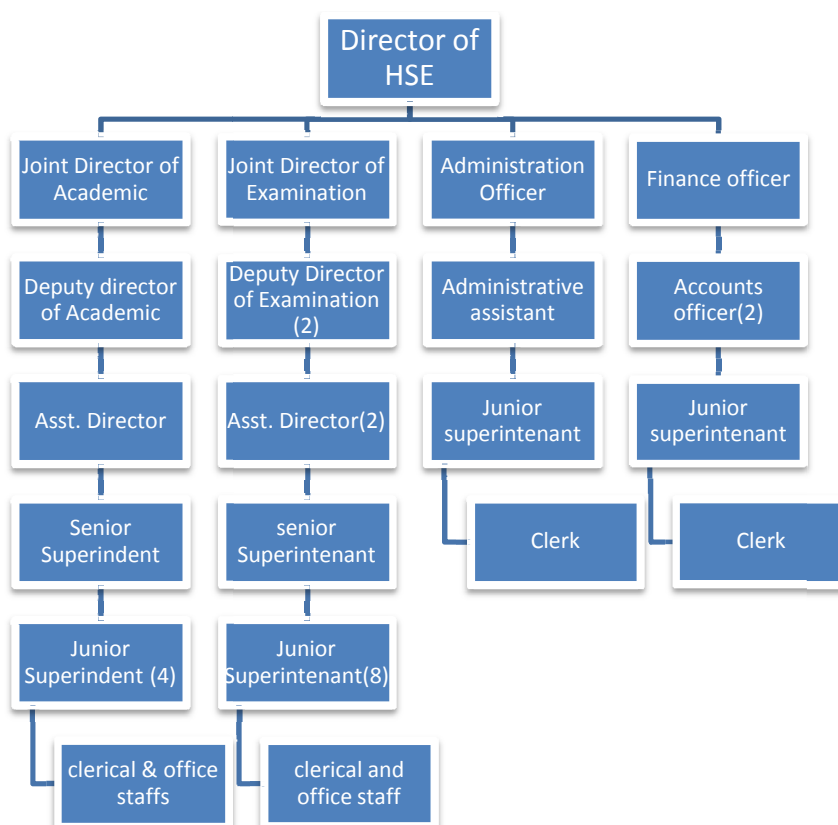


Figure 1. Organisational chart of higher secondary education system

The figure 1 shows the organizational hierarchy of higher secondary education in Kerala. Director of HSE look after higher secondary stage of education in Kerala. He is at the Top of the organizational structure. He is assisted by Joint Director of Academic, Joint Director of Examination, Administrative officer, and Finance Officer. Deputy Director of Academic is in charge of academic related activities and under him Assistant Director and below him there are Senior Superintendent, Junior superintendant, and clerical and office staff. Deputy Director of Examination is in charge of examination and under him two assistant directors and below him there are senior superintend, 8 junior superintend, and clerical and office staff. Then there is Administrative officers, and a Finance officer.

Regarding academic administration there are regional directors under the director and Principals at institution level.

Historical Overview of Vocational Higher Secondary Education (VHSE)

The history of VHSE is essentially a history of mans effort to improve his technical competence in order to upgrade his economic position in society. This has been accomplished by mastering, shaping, and directing his environment towards economic ends through technology. Technology evolved from the application man's creativity in his never ending quest for an easier way to a life of abundance and increased leisure time. This process of increasing discovery led to technological advancement which in turn led to an increased need for a new type of education. This new type of education- 'Vocational Education'- has to increase man's ability to understand and apply his technology. Its primary emphasis was on developing man's ability to perform the physical tasks required to use technology.

The root of vocational education can be traced from the ancient times when parents and other significant adults taught children how to satisfy their basic needs. i.e., Vocational training existed in some form or the other even in ancient India. People had to cut wood, wear cloth, prepare their furniture, repair their huts, work on the farm and do various other similar jobs. The son would learn the trade from his parents and gain mastery in the art and then, in turn pass his skill on to his son.

According to Shoopar "prototype of vocational education had started in Russia, when in 1868, a Russian educator Victor Dellavos designed several

courses by which schools could teach skilled trades formerly learned through apprenticeship”.

The industrial revolution gave an impetus to the development of vocational education. As a result of the industrial revolution there was a tremendous change in science and technology. This technological advancement led to an increased need for a new type of vocational and technical education. Besides, it also prompted the emergence of great number of profession; work which earlier had been regarded as an occupation, began to emerge as a fully respected profession including many in the field of agriculture, health, manufacturing as well as many others.

Development of Vocational Education in India

The concept of vocational education cannot be called new in Indian education. In India the issue of vocational and technical education has been there in ancient days. So the development of vocational education can be traced down in the pages of Indian history. Different types of institutions have existed from time to time to provide our youth with special vocational training in a variety of trades. A good number of practical arts were taught in the Gurukulas, ashrams and viharas.

Development of Vocational Education in Ancient Period

Vedas are the oldest literature of the world. In Rig-Veda and Atharvaveda one can find references to technical and vocational education. Mookerji (1947) observed that vocational education might have been started in India during the Vedic period. The Rig Vedic society aimed at attaining material prosperity and wellbeing through vocational education. However,

with the passage of time profession and vocation of that period were transformed and fossilized in to castes and varnas. In that society vocational choice was in fact automatically made more or less of the time of child's birth.

During the Post Vedic or Epic (Ramayana & Mahabharata) period vocational education continued as prevalent in the Vedic age. In the Ramayana, one finds frequent references to Rama's journey by Pushpak viman and construction of bridge for going to Lanka. In Mahabharata one finds mention of wax houses and houses parks of which appear to be having water and other portions dry. The ruins of Mohanjodaro and Harappa tell us the vocational and technical skill of that period.

During the Buddhist period also, education was craft centered. They studied Vedic literature along with the Buddhist religious scriptures. The science of medicine, architecture, painting, sculpture, Veterinary and chemistry are some of the main contributions of this period.

During the Muslim period art of making various types of clothes, wood works, architecture, drawing and ornaments developed remarkably. But vocational education during this period didn't receive any impetus and vocational education lost its importance.

In India when western education was introduced, its main objective was to train Indians to occupy subordinate positions. Lord Macaulay observed in 1835, "we must at present do our best to form a class who may be interpreters between us and the millions who we governs a class of persons Indians in blood and color but English in taste, in opinions, in morale and

intellect". Because of this theory the vast manpower of the country was unutilized for productive purposes.

The history of vocationalisation of education in India dates back to 1854 when woods despatch highlighted occupational education for a large segment of student population. Despatch emphasized the importance of making Indian education useful to life. The Despatch pointed out that "proper arrangement should be made for the vocational aspect so that the educated class might be kept engaged". Thus for the first time Wood's Despatch contemplated provision of vocational education at the secondary stage.

The recommendation of Indian Education commission (1882) was a milestone in the field of vocational education. It anticipated what has come to be recognized later as diversified courses of instruction at the secondary stage of education.

Diversification of secondary curricula and adoption of the common pattern of 10+2+3 for school and college has been recommended by the Calcutta university commission in 1917. The commission examined in-depth the content of education at the intermediate or under graduate stages and come to the conclusion that:

- The intermediate stage was really part of the school course.
- The standard of under graduate education was poor so that the first degree in India was not really comparable to the first degree of advanced countries.

The commission therefore recommended for the inclusion of professional and vocational courses in universities and to the revision of the

intermediate courses in college in order to give a vocational bias. Sainy (1990) says that “the recommendation with respect to the introduction of technological and vocational courses gave a new outlook and perspective to the secondary education in the country”.

The Hartog Committee (1929) throws some light on the main problems of education in India and had made valuable suggestions. The committee recommended introducing diversified curricula for higher secondary education, and more vocational courses should be made available to students as an alternative to academic courses to speed up the process of industrialization.

Development of Vocational Education in Modern Period

The post independence period witnessed the tremendous progress in the field of vocational education along with the rapid growth of industrialization in the country. Earlier, there was the provision of imparting vocational and technical education to only 6600 students. This number increased to 435796 in the year 1963. Now there are 389 vocational higher secondary schools in the Kerala state itself for imparting instruction in 42 discipline and these schools offering vocational education to plus two levels for 33000 students.

The recommendation of Indian education commission (1948) was a mile stone in the field of vocational education. This commission recommended to start intermediate colleges after class x to meet the varied needs of young men and women and to introduce vocational based courses.

Secondary education commission (1952-53) was a land mark in the history of education as it modernized the approach to education. In order to

improve the vocational efficiency of the students, the secondary education commission emphasized the introduction of multipurpose schools in the country to provide varied courses of interest to students with diverse aims, aptitude and abilities.

National committee on Women's education (1957-59) recommended to encourage girls to take up courses in commerce, engineering, agriculture medicine etc., at the university stage by offering them scholarship and other concessions.

Vocationalisation of higher secondary education was introduced in India during 1976-77. Vocational education and training is an important element of the nation's education initiative. Vocational education has been accorded high priority in the NPE 1986. NPE recommends for the introduction of systematic, well planned and rigorously implemented programmes of vocational education to enhance individual employability and industrial development of the nation. Revised NPE (1992) retained the policy frame work of 1986 policy which envisages generic vocational courses at higher secondary stage.

V E in Five Year Plan.

- 1st Five Year Plan: Proposed to establish social school cum community centre with the unit of basic education.
- 2nd Five Year Plan: Proposed to set up workshop and farms in schools. A large number of multipurpose schools was started.
- 3rd Five Year Plan: Emphasized on integrating and improving the status of vocational education.

- 4th Five Year Plan: Diversified courses were given impetus and scholarships were granted to students.
- 5th Five Year Plan: Vocationalisation secondary education was taken as a policy to solve unemployment problem in the country.
- 6th Five Year Plan: Proposed to include experienced craftsman and practitioner of arts to impart skills to the students without undue emphasis on pedagogic issues
- 7th Five Year Plan: “Radical reconstruction of education and envisaged a transformation of the system to relate it more closely to the life of the people.”
- 8th Five Year Plan: The role of vocational education has been looked at in one side to provide the manpower in the emerging field of economy and on the other side providing some professional and need based skills to the people of various capacities.
- 9th Five Year Plan: Scholarship and its number were increased for those students who opted for vocational education. Private school and vocational colleges were encouraged.
- 10th Five Year Plan: Said to link education with the world of work. National open schools and universities have been started to introduce more vocational courses for the benefit of adult learners.
- 11th Five year plan: The mid-term appraisal of the Eleventh Plan emphasized the need for curriculum revision in vocational education, appropriate certification by accrediting agencies, horizontal and vertical mobility with multiple entry/exit possibilities and linkage with industry for employment opportunities.

- 12th Five year plan: In India, only 5 per cent of the population of 19–24 age groups has acquired some sort of skills through vocational education, while the corresponding figure for Korea is as high as 96 per cent. The National Skill Development Mission has also recognised the demand for employment-oriented vocational education programmes with provision for hands-on training. In order to reap the benefits of the demographic dividend, it is critical to align vocational education within the composite framework of secondary schooling. Thus, more efforts are needed for vocational education at the secondary stage. The key strategy in 12th plan is renewed focus on vocational education at the secondary level.

Vocationalisation in Kerala

The 10+2+3 pattern of education was introduced in Kerala from 1983-84 onwards. It is the natural outcome of the Kerala Government's eagerness and sustained effort to bring about change in education. In order to link with the national policy of vocationalisation of education a separate directorate was formed on 1/04/1985. Vocational education at higher secondary stage imparts education with the objective of achieving self/wage/direct employment as well as vertical mobility.

The major reason behind government pushing vocational education is to increase employability of higher education students. The government has recently introduced its new project, the National Vocational Education Qualification Framework (NVEQF), with the objective of making students employable right after their schooling. The University Grants Commission (UGC) is also encouraging colleges to go for skill-oriented courses, which

can be taken by students as a parallel sub-discipline, while pursuing their normal degree level education. UGC is also granting seed capital to these colleges for initial expenditure for setting up infrastructure. Due to the push by the government, many other private colleges will also include vocational education in their curricula, thereby increasing the demand for courses, as well as teachers.

The Prime Minister's Council on National Skill development was set a target of creating 500 million skilled people by 2022 with emphasis on inclusive so as to deal with divides of gender, rural/urban, organized/unorganized, employment, traditional contemporary work place (Planning Commission, 2009). The present formal education and training system is fragmented and unequal and suffers from many deficiencies. There is lack of access to education and training at all levels of the system and over these years various issues and problems have cropped up which require immediate attention.

Growth and Development of vocational higher secondary education in Kerala.

Vocational Higher Secondary Education was introduced in the state in 1983-84 in 19 Government High Schools. Vocational Higher Secondary Education in the state imparts education at plus two level aiming to achieve self/wages/direct employment as well as vertical mobility. The course was designed to prepare skilled work force at middle level in one group or more of occupations, trade or job after matriculation at 10+2 stage of education.

Table 10

Growth of Vocational Higher Secondary Education in Kerala (1988-2017)

Year	No of schools sanctioned	Vocational sections
2016-17	0	0
2015-16	0	0
2014-15	0	0
2013-14	0	0
2012-13	0	0
2011-12	0	0
2010-11	0	0
2009-10	0	0
2008-09	0	0
2007-08	0	0
2006-07	14	100
2005-06	0	0
2004-05	0	0
2003-04	0	0
2002-03	0	0
2001-02	0	0
2000-01	65	186
1999-00	0	0
1998-99	0	0
1997-98	0	0
1996-97	0	0
1995-96	25	50
1994-95	50	200
1993-94	10	34
1992-93	15	30
1991-92	35	100
1990-91	25	50
1989-90	50	150
Up to 1988-89	100	200

Table gives the growth and batches of vocational higher secondary in Kerala. Table reveals that vocational higher secondary education progressed in number till 1995-96. In 1988-89 80 schools were started in government sector and 20 schools are started as technical higher secondary schools. Then the number of schools increased in 2000-01 academic year and the last expansion during 2006-07. The relatively small number of vocational higher secondary in northern region of the state has prompted the Govt. to start 14 new Govt. vocational higher secondary schools in the region during 2006-07 (ER 2007). Now the number of vocational higher secondary schools in Kerala is 389 with 1100 batches. Of the 389 schools 261 in Government sector and the remaining 128 are in aided sector.

Growth, structure courses and development of VHSS education in Kerala.

VHSE was introduced in the Kerala in the academic year 1983-84 in 19 Government High Schools. VHSE in the state imparts education at plus two level aiming to achieve self/wages/direct employment as well as vertical mobility. The course was designed to prepare skilled work force at middle level in one group or more of occupations, trade or job after matriculation at 10+2 stage of education.

Courses in 35 subjects are available in VHSE for students. English language is compulsory with any one of the second languages offered for HSS courses such as Malayalam, Hindi, Arabic, Sanskrit, Tamil, Urdu, Kannada, Syriac, French, Russian, Latin and German and a combination of four subjects, depending on the stream selected.

VHS education was introduced in 19 schools with a few selected courses and was extended to 73 schools in 1985-86 by offering 27 different vocational courses. In 1988-89 there were 100 schools with a total of 200 batches (sections). The VHSS education programme continued to expand every year until 1995-96 and the number of schools went up to 310 with a total of 814 sections offering 45 different courses. The next expansion came in 2000-01 and the number of schools went up to 375 with a total of 1000 batches. With the last expansion in 2006-07, at present, there are 389 schools with 1100 batches in the state imparting VHSS Education in 35 courses.

Directorate of VHSS education conducts two year VHS course at HSS level in Kerala. The structure of vocational courses consisted of three parts. Part one and part two are compulsory to all VHSS students.

Vocational higher secondary schools and courses.

Structure of vocational higher secondary courses in Kerala.

Directorate of Vocational higher secondary education conducts two year vocational higher secondary course at higher secondary level in Kerala. The structure of vocational higher secondary courses presented in Table

Table 11

The Structure of Vocational Higher Secondary Courses in Kerala

Part I	English, Entrepreneurship development	Compulsory
Part II	Vocational subjects (Theory and practical)	Compulsory
	Group A Physics, Chemistry, Mathematics	Optional
	Group B Physics, chemistry, biology	Optional
Part III	Group C History, Geography, Economics	Optional
	Group D Business studies, Accountancy, Management	Optional

Source: <http://DVHSE.gov.in>

Table shows the structure and combination of vocational higher secondary courses in Kerala. Part I and Part II are compulsory to all vocational higher secondary students. Pass in Part III along with part I and Part II is essential to get higher studies admission. Students who passed Part I and Part II will be awarded certificate but the student is not eligible for higher studies.

As per G.O(MS) No. 102/2015/Gl.Edn. Dtd.07.05.2015 there was 35 courses in 2015-16 onwards. These courses are divided in to four groups named Group A, Group B, Group C, and Group D. There are 10 trades (courses) under Engineering, 3 under Agriculture, 7 under Allied health care, 2 under Animal Husbandry, 3 under Fisheries, 3 under home science, 1 under humanities and 6 under Business and Commerce. In Kerala, there are VHSS education functioning under government and aided schools.

Table 12

Number of Students Appeared and Passed Vocational Higher Secondary Examination 1995-2016

Year	No of students appeared			No of students passed		
	boys	Girls	Total	Boys	Girls	Total
1995 MARCH	7222	5686	12908	2921	2036	4957
1995 SAY	2403	2304	4707	581	715	1296
1996 MARCH	8104	6004	14108	3112	3102	6214
1996 SAY	1997	1901	3898	946	1144	2090
1997 MARCH	10107	8108	18215	4521	4091	8612
1997 SAY	4127	3580	7707	1576	1508	3084
1998 MARCH	8483	9778	18261	3184	5174	8358
1998 SAY	4091	2961	7052	1878	1953	3831
1999 MARCH	8701	9864	18565	5050	7194	12244
1999 SAY	3559	2872	6431	1127	825	1952
2000 MARCH	10009	11243	21252	5161	7266	12427

70 HIGHER SECONDARY EDUCATION SYSTEM

Year	No of students appeared			No of students passed		
	boys	Girls	Total	Boys	Girls	Total
2000 SAY	3620	3461	7081	1159	1112	2271
2001 MARCH	11905	7298	19203	8091	4960	13051
2001 SAY	2884	1158	4042	1632	1183	2815
2002 MARCH	11534	11840	23374	8364	8874	17238
2002 SAY	2712	2681	15393	1968	2000	3968
2003 MARCH	11681	13862	25543	7782	10941	18723
2003 SAY	2764	2805	5569	2000	2105	4105
2004 MARCH	16850	18427	35277	7402	9050	16452
2004 SAY	3151	3319	6470	1394	1616	3010
2005 MARCH	12953	14613	27566	6844	9468	16312
2005 SAY	2633	2417	5050	1137	927	2064
2006 MARCH	15679	16716	32395	7604	10247	17851
2006 SAY	3139	2733	5872	1663	1535	3198
2007 MARCH	11175	13047	24222	7786	10964	18750
2007 SAY	4398	4285	8683	4258	4179	8437
2008 MARCH	13131	13526	26657	9392	11426	20818
2008 SAY	3970	2265	6235	2297	1516	3813
2009 MARCH	12060	12637	24697	8970	10637	19607
2009 SAY	5230	3285	8515	1885	1311	3196
2010 MARCH	12771	13804	26575	8893	11188	20081
2010 SAY	5260	3235	8495	1404	939	2343
2011 MARCH	13197	13408	26605	9641	11766	21407
2011 SAY	3014	1199	4213	974	480	1454
2012 MARCH	13567	13135	26702	10703	11982	22685
2012 SAY	2109	646	2755	146	60	206
2013 MARCH	13631	12548	26179	10881	11534	22415
2013 SAY	2196	734	2930	446	176	622
2014 MARCH	14172	12653	26825	12106	11812	23917
2014 SAY	3928	2198	6126	914	987	1901
2015 MARCH	14628	13074	27702	11112	11234	22346

Year	No of students appeared			No of students passed		
	boys	Girls	Total	Boys	Girls	Total
2015 SAY	2963	1625	4588	1028	804	1832
2016 MARCH	16401	13202	29603	10860	11319	22179
2016 SAY	3721	1212	4933	858	407	1265

Source: Directorate of Vocational Higher Secondary Education. Economic review various issues.

Table 13

Vocational Higher Secondary Result 1995-2016

Year of Examination	No of Students Appeared	No of Students Passed	% EHS
2016	29603	22179	74.92
2015	27702	25398	80.54
2014	26825	23917	89.16
2013	26254	22408	85.35
2012	26702	22685	84.96
2011	26605	21407	80.46
2010	26575	20081	75.56
2009	24697	19607	79.40
2008	26657	11426	78.09
2007	24222	18750	77.41
2006	32395	17851	55.10
2005	27566	16312	59.17
2004	35277	16452	46.64
2003	25543	18723	73.29
2002	23374	17238	73.75
2001	19203	13051	67.96
2000	21252	12427	58.47
1999	18565	12244	65.95
1998	18261	8358	45.77
1997	18215	8612	47.28
1996	14108	6214	44.05
1995	12908	4957	38.40

Source: Directorate of Vocational Higher Secondary Education. Economic review various issues.

Table shows the vocational higher secondary result from 1995 to 2016. Percentage of higher studies eligibility is more than 70% in the last eight years.

Activities and Programmes in Vocational Higher Secondary Education in Kerala

Examination.

Board of examination.

It was constituted for the proper conduct of various public examinations like public and SAY examinations of two years and various module examinations for skill evaluation, and publication of result. It consists of eighteen members and the Director of Vocational Higher secondary Education is the chairman of the Board.

Schemes of Examination.

- *Continuous Evaluation Grading Revised Scheme.*

This scheme was introduced from 2008-2009 and is to end during the academic year 2015-16 for the regular students. Both the scores of first and second year are reckoned for the declaration of results. A registrant of the scheme will become Eligible for Higher Studies, if he/she secures the grade D+ for all subjects except Vocational Practical. For Vocational Practical the minimum grade is fixed as C.

- *Continuous Evaluation and Grading (Revised Cum Modular) Scheme.*

With the introduction of revised curriculum of Vocational Subjects, the new scheme Continuous Evaluation and Grading (Revised Cum Modular) Scheme is introduced from the academic year 2015-16 onwards. In the

scheme, the syllabus is restructured into four modules and in each module a student has to go through Skill evaluation for which a maximum score of 100 is earmarked. Those who secure minimum of 50% of score became eligible for securing a skill certificate.

On the job training.

For enriching students with practical experience, the vocational higher secondary students are taken to a service centre or repair centre or production unit to work in a real life situation under the guidance of an expert practitioner for a particular period. The evaluation is done jointly by the teacher and the expert practitioner. Individual or small group project is assigned to students and it will help them to consolidate their learning, learn to communicate, and achieve the time target.

Production cum training centre.

Under this scheme vocational higher secondary schools undertake semi commercial ventures and develop entrepreneurial skills among students.

National Service Scheme.

It was started to establish a meaningful linkage between the school and the community. Student youth, teachers and the community are considered the three basic components of the National Service Scheme. It motivated the student youth to work for the up-liftment of the villages/community.

Career guidance.

It aimed to help vocational students to provide information about educational and career choices.

Find labour.

In order to avoid this scarcity of labours, such as Drivers, Electricians, Plumbers, Mechanics, Technicians etc. VHSE has introduced the Mobile application-‘Find Labour’. The intention of this mobile application is to find skilled labours and provide the services and availability in time from the rural and urban areas through online. Students passed in Vocational Education and skilled labours in the proximity of VHSE schools can take advantage of this opportunity by registering their details in the website <http://findlabour.in/register.php>.

How are you? Help line 9446835879.

Students can report any issues including personal, academic and family problems through voice chat and the line swear the chat sent by the student and parent confidentially. ‘How are you’ line will be active only on Wednesdays from 04:30 to 06:30 pm excluding holydays .It consist of students and parents sharing live line counselling by experts.

Apprenticeship.

Apprenticeship training enables the pass outs to get acquainted with the industrial environment and to get firsthand experience of working in an industry and its work culture. It is not substitute for the practical work or work shop training in the school.

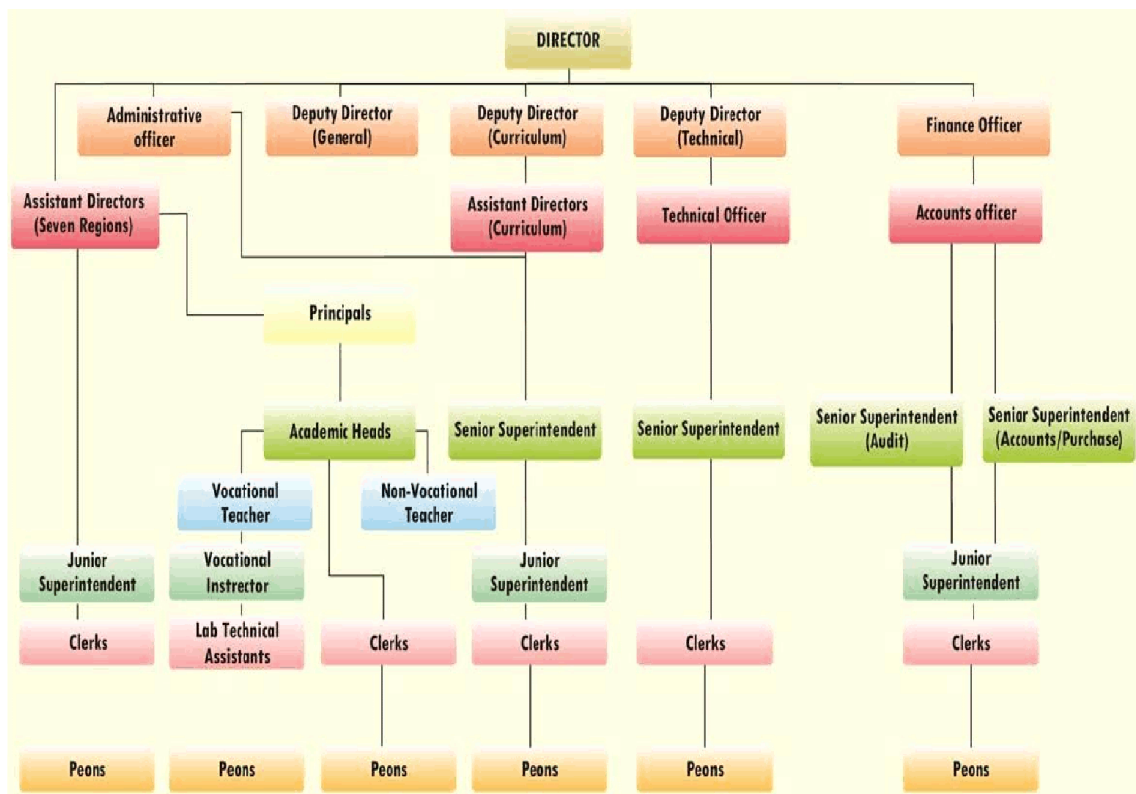
Job fair.

Job fair in all regions provides a meeting platform for both job seekers and job providers and eliminates the gap in between them. Department of VHSE conducts job Fairs along with the Apprenticeship Selection camps.

Career slate.

Vocational Higher Secondary Education Department opens a new wide window of career guidance to VHSE ongoing students in their own class rooms. An innovative project Career Slate is introducing as part of the annual Plan 2015-16. It consists of general awareness section for empowering emotional intelligence, articles related to curriculum, higher studies opportunities in the country and outside and career opportunities in the corresponding vocational course. The articles for the four segments developed and published fortnightly by a state level Team Career under the Career Guidance Counselling Cell Thiruvananthapuram.

Organizational Chart of VHSE in Kerala



(Source: www.vhsekerala.gov.in)

Figure 2. Organisational chart of vocational higher secondary education

Figure 2 shows the organizational chart of vocational higher secondary education in Kerala. Director of V HSE look after vocational higher secondary stage of education in Kerala. He is at the Top of the organizational structure. He is assisted by Deputy Director of general, Deputy Director of curriculum, Deputy Director of Technical, Assistant directors of seven regions such as Kollam, Chengannur, Ernakulam, Thrissur, Kuttippuram, Vada-kara, and Payyannur, Administrative officer, and Finance Officer.

Section II

Review of Related Studies

Literature review is “the selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular stand point to fulfill certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed” Hart (2001). It is based on the assumption that knowledge accumulates and that people learn from and build on what others have done Neuman (2008).

The investigator made a thorough search for research done in the area of the present study and related areas. The investigator felt this crucial aspect of higher secondary education, is the one where only a few research work have been done. This clearly indicates the fact that this area is highly neglected by educationists, researchers and policy makers. In this chapter, the literature review and studies in close proximity to the present study have been discussed.

The studies, observation and suggestions made by different authors which the investigator could locate in books, journals, theses, dissertations and from internet are presented in the following descriptions.

A thorough investigation of related literature is necessary to understand the significance of the present work to evolve a new insight and build up a new approach to the study.

Bhargava (1955) carried out an investigation regarding the history of secondary education in Uttar Pradesh with special reference to educational policy and finance (1904-1947). Objectives of the study were to present the hitherto unknown pages of varied and interesting history of education in Uttar Pradesh and to compare the progress of education in Uttar Pradesh with that of rest of India and to critically study the education from the primary to higher stages. The study revealed that in the beginning of the twentieth century secondary education was coming in to shape as a separate entity and the structure of school was modified.

Pattel (1958) conducted study of basic education and its working in the state of Bombay (a historical review). The study based on the various reports on basic education as well as on the periodical development reports since its conception by Gandhi in 1937. The basic education scheme has been discussed very thoroughly from various angles-according to Gandhi every school could be made self supporting.

Shukla (1958) conducted a study on educational development in British India (1854-1904). The study aimed at tracing the growth of education and educational structure during the British period. The study

focused on two factors shaping educational development close association of education with state apparatus and the desire of the rulers to anglicize and westernize the middle class for rapport between rulers and the ruled.

Saxena (1959) conducted a study on pre primary education in India. It was found that the pre basic method was not yet popular in India chiefly due to the rather strict and idealistic views of the basic educationist and the inadequacy of effort to popularize it as a distinct stage of the basic scheme.

An exploratory study on democracy and higher secondary education in Uttar Pradesh were done by Singh (1960). This is intended to study the problems of higher secondary education in the demographic frame work. The study revealed that students were very much caste conscious and only 60% of them regarded India as the home land of all the religious communities.

Rege (1961) studied about the history and survey of education in the Ratnagiri district. It was seen that in 1820 there were in the area of study only 40 schools, each with an average strength of 20. The teachers were mostly Brahmins by caste, the depressed classes were identified the benefit of schooling. During the last twenty years a movement had been launched to user in all round development of the village of Ratnagiri district.

Jha (1961) conducted the study of education in Bihar (1813-1859).The study aimed at making a critical analysis of education in Bihar during 1813-1859 with a socio administrative perspective of the province. The study has shown how to working of the various educational schemes during the period.

Banerjee and Mukherjee (1962) made an investigation on facilities available to students and teachers for study and work in higher secondary

schools of West Bengal. The survey revealed that most of the facilities for study and work that were made available to students and teachers were inadequate and unsatisfactory.

Parimoo (1963) held a critical study of the educational conditions prevalent in India from 1526 AD to 1707 AD. In the findings researcher had pointed out the period under review is significant in the sense that it presents intellectual luminaries belonging to different castes.

Nahar (1964) conducted a study on the history of education in the city of Bombay, (1820-1920). The major findings during the period under study the education in Bombay could progress in various branches of knowledge such as primary, secondary and higher education in arts, science, technical, commercial and legal education, arts, physical education and education of the educators most satisfactorily because there had been a happy co operation between the officers of the Government and private individuals.

Tiwari (1964) made a study on primary education in Uttar Pradesh. The study revealed that economic status of the teacher is very low, system of payment of salary is unsatisfactory and there were a number of problems connected with enrollments.

Aino (1964) made a study on history of primary and secondary education in Southern Nigeria, 1987-1952. The study aimed at tracing the growth of education in Southern Nigeria with special reference to Yoruba land and analyzing the specific problem of indigenous language in education. The findings of the study indicated that informal education which was commonly wide spread in Yoruba land prior to the time that the English

system of education was introduced is examined and the examination of the problem of secondary education with its organizational pattern, type of secondary education, facilities available in Southern Nigeria indicates the need for expansion.

Bose (1965) made an investigation on educational facilities available in the higher secondary schools of West Bengal. The study revealed that the existing conditions did not allow the students adequate freedom of choice of their subject, absence of an adequate pool of competent and devoted teachers was one of the greatest impediments to the successful implementation of the course, Library facilities were very poor in many of the schools. And regular periodical examinations were not much stressed.

An evaluation of the existing teacher training programme for primary teachers in the state of Maharashtra were taken up by Upasani (1966). The study is an attempt to evaluate the existing teacher training programmes in the state of Maharashtra. The result of the study recommended that, it is necessary that the minimum qualification prescribed for recruitment as primary teachers or for admission to training institutions be immediately raised to the completion of a secondary school course and the duration of primary teacher training should be extended to two years.

Pal (1967) made an investigation on the load of work on higher secondary school teachers in Uttar Pradesh. The investigation revealed that the teachers entered the profession with favorable attitude towards teaching, but later on the circumstances, the service condition and the other factors contributed to their frustration and dissatisfaction.

Gupta (1967) studied about problems of higher secondary schools of Agra district. The main objectives of the study was to find out the curricular and financial problems of higher secondary schools of Agra district, there by determining the factors for the poor quality in education and find out whether there was any relationship between curricular and financial problems. The study revealed that the grant in aid was the main source of income meeting 39.9% of the recurring expenditure these schools. Administrative load of work of principals was heavy because of lack of helping hands and interference of managers and provision for co curricular activities was not satisfactory.

Desai (1968) held a critical study of the growth of secondary education in Kaira district 1947-1962. The study revealed that number of schools was 61 in 1948 rose to 128 in 1962 and strength of school going boys and girls had increased steadily over the year.

Kamlaamma (1969) made an investigation on history and problems of primary education in Kerala. The objective was to study the major problems affecting primary education in the state. The major findings of the study includes: the majority of Government school selected for study have no adequate enclosed area as per Kerala Education Rules. Provision of special teacher is unsatisfactory in almost all the schools. Very few teachers have taken advantage of refresher courses and in-service training and the head masters in Government schools did not favor the idea of participation in school administration.

Chatterjee (1971) conducted a study on “Agricultural education at the higher secondary stage in West Bengal”. The major objectives of the studies

were to study the selection procedure adopted for agricultural courses and the educational facilities available in schools and their neighbourhood. The data was collected through a questionnaire from 34 schools having agricultural streams. The major findings were except in few cases, practically no objective techniques were used for selection procedure. Most of the schools offered essential facilities and appeared to utilize community resources for vitalizing classroom instruction.

Bhat (1972) conducted a critical study of vocational education in West Germany. The study revealed that in Germany people have more positive attitude towards dignity of labor and hence vocational education was established there on stronger grounds as compared to India, Vocational education is arranged according to local needs and the researcher suggested vocational education should be made a main part of educational system.

Desai (1972) conducted a critical study of the development of secondary education for girls in Gujarat: its history and present day problems. He concluded that during 1960-70 the state has made a rapid progress in the development of secondary education for girls and problems regarding girl's education removed by establishment of more high schools in rural area and by providing more economic incentives.

Gaur (1973) made an investigation on the factors affecting the occupational aspirations of higher secondary school students of Delhi. In the findings the researcher pointed out that there exist significant difference between the levels of occupational aspiration of boys and girls and between SES and occupational aspirations.

Kaura (1973) held a critical study of the development of secondary education in Punjab since the year 1947. The major aim of the study was to evaluate the development of secondary education in all phases in Punjab since 1947. The major conclusions were; student enrolment rose five and half times, but the secondary schools just doubled in their number, the number of teachers went up only 3.75 times consequently the class room became overcrowded and the resources per student came down.

Shukla (1976) made a critical and constructive study on the secondary teacher education programme in Odessa. The findings of the study indicated that there are five state controlled and one NCERT controlled co educational teacher training institutions in Odessa. About 53% of teacher educators did not possess the qualifications recommended by the education commission 1964-66. The physical facilities provided in the institutions were not satisfactory.

Aikara (1978) held a study on the implementation of higher secondary in Bombay. The major objectives were to find out the main problems experienced by school, colleges, teachers and students and the drawbacks in the implementation of higher secondary with special reference to Bombay. The study found that the new system was welcomed in school and colleges, Government was blamed for introducing it without preparation and without meeting the exigencies arising because of the change from the old to new pattern the academic content was much better and many of the policies failed or met with formidable difficulties because of inadequate planning

Arunjatal (1979) carried out an investigation regarding the efficiency of the secondary school system in Tamil Nadu. The study revealed that 55%

school had inadequate physical facilities, 35% had inadequate facilities for sports and games. The work load of head of institution was about eight and half hours per day with teaching and correction work which was roughly one third that of a graduate teacher.

An evaluation of the educational programmes teaching and instructional facilities offered at the elementary stage was taken up by Mehdi (1979).

Yeli (1979) made a critical study of pre primary education in Karnataka. The study revealed that the nursery type school dominated the entire fabrics of pre primary school in Karnataka and many schools did not have proper facilities for indoor activities and library facilities for teachers.

Amarnath (1980) made a comparative study of the organizational climate of Government and privately managed higher secondary schools in Jullundur district. The major findings of the study were; the government and privately managed schools as a group did not differ significantly in their organizational climate but differed from school; to school and no two schools had similar organizational climate, which was attributed to the differences in the personality traits of the principals and teachers.

Gangaih (1980) conducted a critical study of English teacher education in Andhra Pradesh. The study reveals that the performance of the majority of trainees on the English test was far from satisfactory.

Gogate (1980) conducted a critical study of the conditions of second year of junior colleges in Maharashtra-197677. The findings of the study indicate that the rural colleges had better accommodation than rural schools Library facilities were better in colleges than in schools and were better in

urban areas than in rural area and Lab facilities in urban and rural colleges were better than in rural schools.

Joshi (1980) made an investigation into the organizational climate of higher secondary schools of Rajkot city. The major findings of the investigation were; all categories of climate were available in the schools. The number of higher secondary schools with closed climate was maximum, the familiar climate was minimum and there was no difference with respect to the category of organizational climate between Government school and private school, high or low performing schools, those with varying size, location and with different streams.

Patel (1980) held a critical study of higher secondary school organization in Gujarat state with special reference to vocational education. After reviewing the practice of vocational education till 1976, studied its provision in the new higher secondary pattern introduced in 1976. Findings indicate that there was no clear guidance in organizing the higher secondary classes and the frequent changes in the policy puzzled the head, the supernumerary teachers from colleges employed were not sincere in teaching the subject or in dealing with pupils and students blindly rushed to the commerce stream creating scarcity in arts and science stream.

Yadav (1980) held 'a critical study of teacher education in the state of Haryana and its comparison with that of CIE, Delhi and RCE, Ajmere'. The findings of the study were the growth of colleges of education was not need based in the state of Haryana and there was no significant difference between the pupil teachers of Haryana colleges, CIE and RCE as far as their attitude towards teaching was concerned.

Bajpai (1981) made an investigation on the progress of higher secondary education in Uttar Pradesh in the post independence period. The major findings were; in the year 1947-48 there were 499 higher secondary schools in U P. The increase in the number of higher secondary schools in the post independence period was 79.6% and percentage of increase for the students and teachers was 65.7% and 73.3% respectively.

Pillai and Thangsamy (1981) held a study on vocationalisation of higher secondary stage of the 10+ 2+3 pattern of education. The major findings and outcomes of the study were; The vocational stream was considered more suitable for less able students and the academic stream for better students by 65% of the teachers and public and 55% of the teachers and public felt that the vocational stream of the higher secondary stage could be better extended to the +3 stage also at the collegiate level.

Indian institute of education (I982) held a critical study of the dropouts at +2 stage (new XI and XII) in Raigad (Kolaba) district Maharashtra, during 1978-80. The major findings of the investigate were, 34.935 students had not joined classes XI and XII. 85 randomly selected students were contacted at their residence. They informed that they could not join XI or any other course due to poverty and many of students did not know what to do further after their X (SSC).

Hemambujam (1983) conducted a critical study of teacher education at the secondary level in Tamil Nadu. The findings of the study indicate that the state Government controlled the recruitment of all the teacher educators and the comprehensive B Ed curriculum was not effectively implemented due to time shortage.

Soundaravalli (1984) conducted a critical study of the functioning of the vocational education stream in higher secondary schools in Tamil Nadu. The major findings of the study are nearly 90% of the schools were upgraded as higher secondary schools with academic and vocational streams in the year 1978. Some 21 different vocational subjects were offered in these schools and about 90% of the schools functioned well and were able to produce 90% result in the public examination system and the students were admitted in the vocational stream without any aptitude test.

Daniel (1986) conducted a study of perception of the school community in the city of Madras about reforming of the present examination system of the higher secondary school stage in Tamil Nadu. The major objective of the study was to construct and standardize a tool to measure the perception of teaching community of the higher secondary schools of Madras city about examination reform at the higher secondary school stage. The finding of the study shows that the teaching community, as a whole, is highly favourable for the introduction of internal Assessment and Question Bank as Examination Reform. The teaching community of the Higher secondary school stage in the city of Madras accepts the Reform programme by showing a positive attitude towards it.

Seetharamu and Mavikar (1986) conducted a study on secondary teacher education. The major findings were most of the institutions were located in Bangalore city and the majority of them were non residential in nature with strength of 100 or less and the output of students from aided institutions was better than that of unaided institution.

Siddiqui (1986) conducted a study of the existing system of education in Nepal. The major aim of the study was to study the development of education in Nepal. In the findings the researcher had pointed out before the introduction of the national education system in 1971, 86% of the people were illiterate.

Daniel (1986) conducted a study of the perceptions of the school community in the city of Madras about reforming of the present examination system of the higher secondary school stage in Tamil Nadu. The overall purpose of the study is to examine the perceptions of the teaching community of Higher Secondary schools in the city of Madras about introducing Internal Assessment and Question Bank in higher secondary classes, and to ascertain whether or not their perceptions in this regard are influenced by their biographical and institutional backgrounds. Eleven Varimax Factors were identified and suitably named. Out of these eleven factors, *Validity Factor* has covered 19.3 per cent of the common variance. Hence, this is the most dominating factor.

Gautham (1988) conducted a study of productivity oriented education with reference to the new pattern of education (10+2+3). The major findings were the majority of educational institutions were found not keeping abreast of the current trends and development in education. The existing system of 10+2+3 pattern of education has failed to implement the desired productivity oriented curriculum.

Maheshan (1989) held a critical study of some problems at the plus two stage of education in Karnataka. Major findings were academic control of

the plus two stage and the authority to start fresh junior colleges vested with the Board. Administrative control was experienced by the DPI, collegiate education and pre university education respectively.

Chaudari (1990) made a study on the development and problems of higher secondary education. He concluded that during 1976-77 there were as many as 755 higher secondary schools in the state of Gujarat. In 1986-87 the number of the plus two levels shot up to 1547. The results of the final examination were also found to be not satisfactory.

Hosseini (1990) conducted a study on 'Educational Environment of Higher secondary schools of West Asarbayjan of Iran as Perceived by Principal , Teachers, Students and Local Community and Their Attitudes Toward school System', Researcher suggested the need for providing adequate facilities of every kind so that students develop their innate powers.

Monteza (1991) conducted a study about educational environment of higher secondary school west Azerbaijan of Iran. The study revealed that the principals, teachers, students and local community towards school system can be bureaucratic nature.

Antony (1992) conducted a study was designed to study the Management of Higher Secondary schools with regard to the Administrative Behaviour of the Heads. The findings of the study throw light on certain aspects of the administrative behaviour of the Heads of institutions. The Heads of Higher secondary Schools neither enjoy open Climate in their institutions nor do they create one. It is further learnt from the study that they do not possess adequate level of innovative proneness, this strongly supports

the view that, because of lack of openness on the part of the Heads to bring about changes in their administrative set up and introduce novel and challenging programmes, the institutions are run on the traditional, mechanical lines of administration. Another interesting finding is that, these Heads of Institutions are not ignorant or incapable of using modern Management Techniques. As they have to face quite a large number of constraints, even in discharging the most essential duties, they find it rather difficult to be innovative.

Modak (1994) conducted a 'a critical study of vocationalisation of education in Ratnagiri district'. The study found that non-availability of efficient teachers, surrounding of the school/Institution and financial stringency are some of the reasons of non achievement of vocationalisation of education.

Chithra (1996) conducted a study on "Psycho-socio correlates of academic achievement of the scheduled caste girl students in the higher secondary schools of Tirunelveli-Kattabomman District". The study revealed that SC respondents had better personality traits except introversion extroversion and anxiety than their NSC counterparts and the standard (XI and XII) of study had not influenced the psychological variables of the SC respondents. The subjects of study failed to have any influence on the self-concept and independence-dependence of the SCs.

Kalra (1997) studied the competencies of principals for efficient management of senior secondary schools identified Morale of the principals, sense of judgment, occupational knowledge, technical knowledge and

manipulative skills as the major factors influencing the efficiency level of institution.

Study by Bharathi (1997) “history of higher secondary education in modern Assam (1968-1990)- A prospective traces the historical development of higher secondary education in modern Assam covering 1968-1990. It focused on identifying vital problems in higher secondary education such as its structure, administration, and organization, examination and evaluation, medium of instruction, professional requirements, diversification etc. The study reveals that the logical setting of higher secondary education was yet to be decided and implemented. The existing system of examination was not sound and needed to be changed to affect better quality and standard of education. Many items of educational policy both at national as well as state level were not implemented in all seriousness causing non achievement of objectives. The educational plans so far made and implemented failed to incorporate the factors which could be influence development of educational system so as to achieve objective such as social demand economic and political needs etc.

Aneesh (1999) conducted a study on ‘An evaluation of the organization and functioning of vocational higher secondary courses in Malappuram district’. The study revealed that the physical facilities are inadequate in most of the school.

An evaluation of the organization and functioning of higher secondary schools in Kannur district were taken up by Kumar (2000) and he concluded that school; kept rules and regulations of students admission procedures. The backward areas needed higher secondary schools. Majority of students in

classroom of higher secondary school were girls. The inadequate infrastructural facilities negatively affected the proper organization of those higher secondary schools. Majority of teachers and principals are unsatisfied with the present condition of higher secondary education system.

Gopakumar (2000) conducted a critical study on the functioning of the vocational higher secondary education in the Kuttipuram region. The study revealed that in most of the schools, vocationalisation programme is functioning with inadequate facilities. It was found that most of the school lack convenient buildings, suitable equipment and laboratory facilities. Infrastructural facilities available in the Vocational higher secondary schools are not at all satisfactory.

Alavikutti (2002) studied about development of higher secondary education in Kerala. The major findings were there is a need for de linking pre degree and implementing higher secondary education in Kerala after the independence. There is no considerable difference in the year wise results of public examinations in higher secondary education during the period of study. Women teachers were more in number at the higher secondary schools in the state.

Palliyali (2004) conducted a study on facilities and activities of physical education in the secondary and higher secondary schools of Kerala state. The purpose of the present study was to assess the existing facilities and activities of physical education in the secondary and higher secondary schools of Kerala state. The findings of the study reveal that the facilities available for physical education in the secondary and higher secondary schools of Kerala

are inadequate to run a sound programme. There is no post of physical education teachers in higher secondary section.

Sethumadhavan (2005) conducted a critical examination of the programme of vocational higher secondary education in Kerala. The study reveals that all the VHS Students under study possess positive attitude towards vocation. The study proved that rural students, first year students, and girls have more positive attitude. The result shows only an average degree of satisfaction by teachers about the realisation of objectives of the course, and level of professional competency. The result shows low degree of satisfaction about the curriculum. The study showed that percentage shown by teachers and students on infrastructural and academic facilities do not indicate a high degree of satisfaction. Teachers and students reported the present evaluation procedure and follow up are not appropriate.

Rajagopalan (2006) conducted a study on vocational higher secondary education in Kerala- problems and prospects. He concluded that the existing vocational courses are effective for the intellectual development of the students and the existing vocational courses help to develop imagination and basic values in students.

Kansal (2007) in his study revealed that the India education system has failed to keep with the changing demands of its stake holders. The study highlighted the infrastructure has grown since independence yet the perspective and management orientation is the same which incidentally a vertical organization. Need of the hour is to satisfy various stake holders, its teachers, students, employers etc. For this a strategy need to be developed which not only targets quality improvement but also quality assurance.

Ramadevi (2008) examined the constraints in the secondary education of Kerala. The general objective of the study was to identify the constraints in the secondary education in Kerala. The study revealed that the existing classroom facilities in many of the school are not impressive.

Rani (2008) conducted a study to find out the effectiveness of in-service teacher training programme based on the prepared Modules and Self-learning Package on Behaviour Management Strategies for teachers at the Higher Secondary level. The basic experimental design adopted in the present study was pretest – post-test non-equivalent group design. The study throws light on the fact that the prevailing classroom management practices followed by teachers at the Higher Secondary level are not satisfactory in all the select five dimensions of classroom management, namely, Management of advance planning before the beginning of the academic year, Management of physical arrangements, Behaviour Management and Evaluation Management with more focus on the third dimension, namely, Behaviour Management.

A study on the educational and vocational problems and needs of students in the vocational higher secondary schools of Kerala is done by Kuncheria (2009). To identify the educational and vocational problems and needs of students in the vocational higher secondary schools of Kerala, the data were collected from the students, teachers, vocational instructors, Heads of schools and parents representing the fields. The study revealed that majority of the VHS students are studying in government schools (61.5%), in the rural locality (75.6%) and are reported to have average academic performance (78.7%). Majority of VHS students are studying in government schools in the rural locality who show only an average academic performance. Lack of

vocational theory and practical texts as well as proper library facilities, tight time schedule, shortage of water and latrine facilities are the major educational problems. Vocational teachers, non-vocational teachers, head of the school and parents also reported the existence of educational problems.

Tabussum (2009) made a study to find out the relationship of 'academic stress on achievement motivation and study habit among higher secondary students". The findings obtained in present study regarding academic stress and achievement motivation among higher secondary students of U.P. board and C.B.S.E. board is that academic stress and achievement motivation among higher secondary students of both the organization are negatively correlated to each other. The study reported that major share of responsibilities for a excellent achievement motivation and study habits of the students of +2 level rests with the parents.

Geethu and Minikkutti (2011) conducted a study on leadership qualities of higher secondary students using constructivist learning environment as a reference'. The findings of the study implies generation of a sustainable constructive learning environment which prepare the learner for the development of leadership capacity.

Kumar and Astalin (2011) in his study tried to found the environmental awareness among higher secondary students and some educational factors affecting it. For collecting data the tool "Paryavaran Jagrukata Prashnavali" constructed by investigator was used. Post Hoc Tests, F-test and t-ratio test had been used for analysis of data. Main findings of this study are the students of 11th and 12th standard were identical as for as their

environmental awareness was concerned. Science stream students had more environmental awareness in comparison to arts stream students. The CBSE students had more environmental awareness in comparison to UP Board students. Parent's group of students belonging to literate, undergraduate, post graduate and research had more environmental awareness in comparison to parent's group of students belonging to high school and intermediate. Finally the male students had also more environmental awareness in comparison to female students. The findings of the present study reveal that teachers should sustain their attitude about look for the positive development in the students of belonging to different parent's educational group rather than the acquisition of bookish information

Babu (2012), made an attempt to focus on the extent of physiological and psychological changes during the public examination in the student community. Also suggest better ways and means to reduce stress level with the plus two students. The researcher have identified number of negative aspects with the students those who are going to meet the public examination. Efforts should be made to overcome the negative consequences of high stress. Stress management is required when an individual is unable to cope with the demanding environment. Some individual strategies such as physical exercises can be both reactive and proactive, but most are geared towards helping the person who is already suffering from stress. As students, physical exercises such as walking, jogging, swimming, playing etc. are good methods of overcoming stress.

Mohamedayupkhan and Mani (2012) conducted a study to find out the level of Students Personal Problems, Study Involvement and Academic

Achievement among the higher secondary school students. The purpose of the investigation was to study the personal problems, study involvement and academic achievement among higher secondary school students of Usilampatti education district of Madurai region, Tamilnadu in selected schools. The present study reveals that the higher secondary school students have only moderate level of personal problems, study involvement and academic achievement. Therefore the higher secondary school students who are also the basic pillars of the educational system of India need to be provided all kind of support from the family, school, society and the nation, to establish a strong community bond desirable for the progress of human kind.

Arumugasamy (2012) in his study aimed to investigate the intrinsic factors science teachers perceive important for motivating them to teach and how their perceptions are affected by their gender, marital status, grade level taught, teaching experiences and geographical location of work place. During interview the majority of teachers ranked enjoyment as one of the three most important factors influencing motivation to teach. The female teachers regarded enjoyment and satisfaction factors as more important factors affecting motivation to teach science than the male teachers. The teachers teaching only at one level (lower or upper secondary) perceived enjoyment variables as more important than those teachers who teach at both lower and upper secondary levels. The teachers' perceptions of importance the intrinsic variables were not affected by marital status, nationality, grade levels taught and geographical location of their workplace.

Anil (2012) conducted a study on 'Vocational Higher Secondary Education in Kerala: A Status Study of Students, Pass Outs and Training

Components' and the study recommended to take immediate measures by the VHSE department to create proper awareness about VHSE among the students, pass outs, teachers, and principals

Prasida and Sumathi (2013) conducted a study to determine the effectiveness of multimedia approach on achievement in business studies of higher secondary school students in Kazaragod district. The findings of the study proved that multimedia instructional package was effective than present method of teaching in many aspects.

Chandrasekaran (2013) conducted a study on Creativity and Academic Achievement of Higher Secondary School Students in Tamilnadu. The aim of this research is to examine if a relationship exists between creativity and academic achievement and if the relationship differs between males and females. Findings of the study shows that aspects of creativity were not related to academic achievement for both males and females.

Ahmar and Anwar (2013) examined the effects of gender and socio-economic status on academic achievement of higher secondary school students of Lucknow city. This study shows that gender does not influence the achievement in science at higher secondary school (Standard -XI) level. Also the result of this study showed the difference between high and low socio-economic status groups. It is found that the academic achievement was influenced by the socio-economic status and those who belonged to high socio-economic status showed better performance.

Velmurugan and Balakrishnan (2013) conducted a study on Achievement Motivation of Higher Secondary Students in Relation to Locality and Type of Family. The objective of the study was to investigate

the achievement motivation of higher secondary students in relation to locality and type of family. The result of the study reveals that there is no significant difference between the rural and urban school students in their achievement motivation. Also, it is inferred that there is no significant difference between the general stream higher secondary students coming from joint family and nuclear family in their achievement motivation.

Singh and Varghese (2013) made an attempt of analyses the strength, weakness, opportunity and threat of vocational courses at higher secondary stage, the investigators adopts normative survey method for the present study. The teachers showed a positive attitude towards vocationalisation of Higher Secondary Education. This study deals this aspect and that will enable the authorities to incorporate modifications in designing various vocational courses so as to face the challenges of future in a better way.

Reddy and Anuradha (2013) examined the ‘Occupational Stress of teachers working at higher secondary level’. The results reveals that, around 88 percent of higher secondary teachers are experiencing moderate and high levels of occupational stress. This indicates the need for interventions in strengthening and reinforcing teacher’s self-confidence and positive attitude, and weakening the stress creating factors.

A study “Total quality management in higher secondary school education in Kerala” conducted by Sreeja (2013). This study examines Continuous Improvement, Teamwork and Customer satisfaction. The results of the study revealed that ‘above moderate level’ of continuous improvement in teaching, teachers, evaluation and infrastructure by ensuring above moderate satisfaction level of teachers, students and parents about the process, are strong

indicators of the efficient implementation of TQM in higher secondary school education in Kerala.

Mawi and Maisanam (2014) conducted a study on Attitude and Perception of the Students towards Higher Secondary Education in Churachandpur District of Manipur. The purpose of the study was to investigate the attitude and perception of the students towards higher secondary education in Churachandpur district of Manipur. The overall obtained results indicated that student showed an unfavourable attitude and perception towards higher secondary education. The result of the study showed that students' attitude and perception towards higher secondary education were at low level. The results that could be drawn were that attitudes and perception on the basis of motivational level in studies, co-curricular activities and curriculum were at high level, while on the basis of choice of subjects and learning, teachers and instructors, physical infrastructure and level of satisfaction on academic performance were at low level.

Reena and Boruwa (2014) conducted a study to find out the differences, if any, in the study involvement between girls and boys and commerce and science students and to determine the interaction effects of gender and stream of study on the study involvement of the students. From the study, it was found that stream of study has no significant independent effect on the need areas Autonomy, Recognition, Abasement, aggression, Nurturance, and overall involvement in studies. The Commerce students have expressed strong need for achievement than the science students. The Commerce students are found to have higher affiliation needs than the Science students. This may be attributed to the fact that the commerce students get more leisure time as

compared to the Science students and want good companions to spend their leisure time with. No significant gender difference was found on the need areas of Achievement, Affiliation, Autonomy, Deference, Recognition, Order, Aggression, Nurturance, and overall involvement in studies.

Augustine, Vazir, Rao, Rao and Nair (2011) conducted a study on Perceived stress, life events and coping among higher secondary students of Hyderabad, India: A pilot study. The study reveals that Students from Government schools had significantly higher scores on avoidance coping and therefore, suitable for a systematic study on chronic stress for early intervention

Statistical Analysis of Constraints Acquiring Higher Secondary Education was done by Khan, Mohiuddin, Baig, and Minai (2014). The aim of the study was to examine, contrast and compare some different socio-economic factors and their reason which affect Higher Secondary education system. This study was focused on some of the factors inside and outside of the institution that plays a vital role regarding the dropout rate of students during their pursuit for higher secondary education. According to our first finding the two main reasons for the students to drop their education in a mid-way are “Poverty” and “Unawareness about the importance of education. It is recommended that the Government should start Educational Card scheme and scholarships for the needy students, to keep continue their education. To increase the awareness of education among people, government should initiate education awareness programs in the underprivileged areas.

Nikhitha, Jose and Valsaraj (2014) in their study concluded that majority of the adolescents experience academic stress ranging from moderate to severe and self -esteem is in normal range. It has proved that

there is a significant but low negative correlation exists between academic stress and self- esteem.

Sumathi, and Jayakumar (2014) conducted An Empirical Study on Stress Management for Higher Secondary Students in Salem District-Tamil Nadu. The study has been made to find out the stress on the higher secondary education students with special reference to Salem City. The study provides information about the various problems faced by the students. Its aim is essentially to prepare the student for matriculations education or higher secondary students or for professional studies. The study reveals that the student community in higher secondary schools follows some unhealthy ways to cope with stress by selecting negative strategies to avoid failure, aiming too low, over scheduling daily life etc.,

Mawi and Maisnam (2014) conducted a study to explore the Attitude and Perception of the Students towards Higher Secondary Education. The overall obtained results indicated that student showed an unfavourable attitude and perception towards higher secondary education.

Ogwokhademhe, et al. (2014) studied the factors influencing the vocational choice of senior secondary school students in Ilorin metropolis, Nigeria. The study found that personal/ social factors was the highest factors influencing senior secondary school students vocational choice and other factors are school and parental factors. The study recommended that school counsellors at all educational level should be trained to provide adequate and effective vocational guidance to students and educative and informative guidance programme should be sponsored in the school for students benefits.

Choudhary and Sengupta (2014) conducted a study on “Determine of Information Seeking among Higher Secondary School Level Students Studying in Southern Districts of Chhattisgarh State” This study explores the deterrents of the information-seeking of student at higher secondary level towards library. The findings made in this study reveal that the resource collections in the school libraries are not qualitatively and quantitatively adequate to fulfill the demands students.

Arjun and Juna (2015), conducted a study on the impact of social networking sites among higher secondary students. The purpose of the study was to determine the influence of Social Networking Sites on the study habit of higher secondary students. Findings of the study indicated that SNS had been greatly influenced among adolescents. The majority of current higher secondary students have had access to the internet and computers for a large percentage of their lives.

Amanulla (2015) conducted a study on influence of social sensitivity teacher accountability and teacher efficacy on professional development of higher secondary school teachers. The major objective of the study is to find out the influence of social sensitivity, teacher accountability, and teacher efficacy on professional development of teachers

A Study on Academic Stress among Higher Secondary Students was conducted by Prabu (2015). The purpose of the study is to find out the level of academic stress among higher secondary students. The study revealed that the higher secondary students are having moderate level of academic stress and irrespective of sub samples of the higher secondary students are having

moderate level of academic stress. The academic stress of male student is higher than female students. The study found that academic stress influenced by parental education, type of school and area

Azeez and Sumangala (2015) conducted a study on “Counselling Needs of Higher Secondary School Students of Kerala: An Exploration into the Teacher Perception”. Results of the study indicate that higher secondary school students have strong counselling needs, as perceived by their teachers. Results also show that there is no significant difference between male and female teacher perception on the counselling needs of higher secondary school students.

Silva (2015) studied Relationship of goal orientation and approaches to learning on achievement in commerce of higher secondary school students in Malappuram district. The result proved that there is a slight relation between approaches to learning and achievement in Commerce. The study will be a light for teacher to understand that the type of learning approach of student plays a vital role in achievement and the study suggested that the teacher must understand the student learning approach and practice best approach to learning among students.

Salma (2015) investigated within learner protective factors of academic achievement of Kozhikode district. The study was conducted to identify the protective factors within learner among at risk higher secondary school students. The study found that self regulation and student engagement are important factors that affect the achievement of students especially in the adolescent period.

Ratheesh (2015) conducted a study to identify the level of value preferences among higher secondary school students. The study reveals that the value preference of the students in aided school is far away from the standard of government and unaided schools. It result an enormous structural imbalance in the present educational scenario

Roopa (2015) conducted a study on Influence of self efficacy and academic stress on process skills in physics of higher secondary school students in Malappuram and Kozhikode districts. The study reveals that self efficacy has a high positive correlation with process skill in physics and the researcher suggest adopting different methods and programmes. In order to improve self efficacy and manage stress provide guidance and counseling to students. The study also suggest that the administrators should be aware of physical and emotional factors consisting learning atmosphere inorder to provide a healthy physics class room.

Amya (2015) investigated Awareness of e waste management among science and non science students of higher secondary schools. The result of the study shows that most of the students have average level of awareness among E waste management and very few have high level of awareness among E waste management.

Jhonson (2015) conducted a study on Vocational choice of higher secondary school students in Kerala. The major objective of the study was to find out the vocational choice of higher secondary school students of Kerala. The study revealed that the student's choice for a vocation is varied for the

total sample and sub sample based on gender, locale, and type of management. The study proved an urgent need for vocational guidance.

Aneesa (2015) examined the working status of students vary with their academic achievement on the basis of variables such as self regulation, student engagement and peer relation. It is found that self regulation student engagement and peer relation is an important factor that affects the achievement of students especially in adolescent period. The study revealed that school may encourage group oriented activities in their teaching learning and provide special care in collaborative learning.

Roobi (2015) conducted a study on entrepreneurial motivation and socio economic status as predictors of career aspiration of higher secondary commerce students in Malappuram districts. The study reveals that entrepreneurial motivation has significant correlation with career aspiration for the total sample and subsample.

Raman and Gupta (2015) conducted a study on “Preparation for the World of Work: Secondary and Higher Secondary Education in India”. This paper examines the secondary and higher secondary education system in India and discusses how it prepares the student for the world of work. The objective of this paper was to examine Indian VET system at the secondary and higher secondary school level and understand various schemes, agencies and policies that are preparing the students for the world of work. “low employability of VET graduates due to skill mismatch” being the most critical challenge faced by Indian VET system. The mismatch

between VET graduate's acquired skill-set and the industry requirement is at the core of the failure of Indian VET system. The way forward for its success would be extensive curriculum reform and streamlining of the VET regulatory bodies.

Rajib (2016) conducted a study on Dimensional Analysis of Life Orientation in Higher Secondary School Students. This study tried to find the existence of any significant difference in the dimensions of the construct Life Orientation, in higher secondary school students. For this purpose, the Life Orientation Test – Revised (LOT –R) for college students prepared by Scheier, M. F., Carver, C. S., and Bridges, M. W. (1994) was administered on 100 urban girl students of class XI of a junior college in Banjara Hills of Hyderabad city, Telangana, India. The study found a significant difference between the dimensions of this construct in adolescents as mean of the dimension optimism is higher than the mean of the dimension pessimism in the adolescent subjects.

Alam (2017) investigated the impact of family on the adjustment of adolescents. Findings revealed that, (i) there is significant difference between adolescents from nuclear and joint families on the measure of emotional adjustment, (ii) there is significant difference between adolescents from nuclear and joint families on the measure of social adjustment. (iii) there is significant difference between adolescents from nuclear and joint families on the measure of educational adjustment.

Ghatol (2017) conducted a study on academic stress among the secondary school students and present the causes and symptoms of stress as well as coping mechanism for stress. The study concludes that supportive and stimulating atmosphere is very necessary for the students to progress in their academic life and for reaching their aim or goal.

Nair and Paul (2017) conducted ‘A Study on Spiritual intelligence among Higher Secondary Students in Relation to their Social Adjustment’. The study suggested that the school authorities should take immediate measures to provide adequate training for developing spiritual intelligence and social adjustment in them.

Conclusion

Review enables the investigator to have valuable informations on various aspects of education system. After a careful scrutiny of the related studies the researcher has gained the tools and methods for this study. From methodological point of view the studies represented in review part are of mixed type in which the researchers’ uses appropriate tools for data collection on any current issue to put forward certain suggestions for qualitative change. Same paradigm is used in this study in terms of fixing the objectives, designing the study, preparing tools and analysing the data collected. Thus the review of related studies was really meaningful.

There had been quite a number of studies on different aspects of education systems. From the related literature it is clear that not much study in the field of higher secondary education in the state of Kerala has been done so far. However, there is no single research study which critically studies higher secondary education at the higher secondary and vocational higher secondary stream in Kerala state. Hence, the research problem on hand viz. “A critical study of higher secondary education system in Kerala” can be considered as an original and novel one. The review of related literature enabled the researcher to gain insight into the problem of research regarding proper research methods, research techniques to be employed and the basis on which to evaluate and interpret the date.

Chapter III

METHODOLOGY

- *Design of the Study*
 - *Methods Employed for the Study*
 - *Sample Selected for the Study*
 - *Techniques and Tools Employed for the Study*
 - *Data Collection Procedure*
 - *Scoring and Consolidation of the Data*
 - *Techniques for Analysis of Data*
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METHODOLOGY

Methodology refers to the theory of getting knowledge, to the consideration of the best ways, methods or procedure by which data that will provide the evidence, basis for the construction of knowledge about whatever it that is being researched is obtained (Sikes, 2004). This chapter gives an overall idea of the methodology followed by the investigator for conducting this study.

In order to achieve the objectives of the study, the investigator followed a mixed design. A research design is the road map that you decide to follow during your research journey to find answers to your research questions as validly, objectively, accurately and economically as possible. It is a procedural cum operational plan that details what and how different methods and procedures are to be applied during the research process (Ranjith, 2014).

Design of the Study

A research design provides a frame work for the collection and analysis of data. Considering the nature of required data, descriptive design was opted and designed for the study by following the principles of mixed research design. Qualitative researchers typically rely on primary methods for gathering information like:

1. Participating in the setting
2. Observing directly
3. Interviewing in depth
4. Analyzing documents and material culture with varying emphases

(Marshall, 2011).

A research design is a plan according to which observations are made and data assembled. The descriptive research design enables researchers to describe or present a picture of a phenomenon or a phenomena under investigation. The success of the study, comprehensiveness of the topic, the reliability of the result and the practical application of the conclusion all depends upon the methodology chosen.

A research design is the arrangement of the condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Jahoda & Cook, 1982).

The purpose of the present study was to critically evaluate higher secondary education system in Kerala. This was a critical study. So, a deep investigation was needed for fulfilling the objectives. Data was collected from different sources for this purpose. Hence, the study came under the design of mixed type research.

The investigator selected higher secondary and vocational higher secondary schools in Kerala for the present study. Data was collected using questionnaires delivered to higher secondary school teachers, vocational higher secondary school teachers and students in higher secondary and vocational higher secondary schools. Observation of infrastructural facilities was done by using an observation schedule. Data about routine activities and programmes in schools were collected from diaries of students and teacher. Interview schedule for ASAP coordinators and principals were used for collecting relevant information from them about various activities and programmes. The data from all these sources were cross checked with each

other and analysis was done regarding all these aspects of the system of higher secondary education. Stratified random sampling technique was used for the selection of the sample.

Methods Employed for the Study

Methods refer to the procedure and instruments used in selecting and constructing research techniques and tools. In this study, the investigator used survey, document analysis, and diary as methods for collecting data. Methods used for the present study includes:

1. Document Analysis
2. Survey
3. Diary Method

Document Analysis

Since the study dealt with the development of higher secondary education, the method adopted by the investigator involved analysis of documentary sources, recording of events and critical interpretation of the data collected. The study therefore was concerned with the description and analysis of the various documents on various aspects of higher secondary education in Kerala. In document analysis, the following were used as sources of data: records, reports, printed forms, letters, autobiographies, diaries, compositions, themes or other academic work, books, periodicals, bulletins or catalogues, syllabi, court decisions, films, and cartoons (Best & Kahn, 2012). The following documents were consulted for the collection of data for the study:

1. Reports of various education commissions
2. Relevant Government orders about higher secondary education in Kerala
3. Special rules for Government and aided higher secondary education in Kerala

These documents were analysed to trace out the history of higher secondary education in Kerala and to gather data on service condition of teachers, and on the administration of higher secondary education system.

Survey

Survey method was found to be the most suitable method for collecting information from higher secondary teachers and students. The data for the study was collected using structured questionnaires.

In this study the higher secondary education programme in Kerala was analyzed in a comprehensive and systematic way. The type of research involved in this study is a qualitative one. The purpose of the study is to critically evaluate the higher secondary education system in Kerala. In this study, the investigator critically evaluated the Kerala State Higher Secondary Education and Kerala State Vocational Higher Secondary Education. Survey was conducted to gather opinion of principals, teachers, Regional Deputy Director (RDD) of Higher Secondary Education, Additional Skill Acquisition Programme (ASAP) coordinators, and students. Surveys were conducted using various tools such as questionnaires, interview schedules and observation schedules.

Diary Method

Diaries are designed to capture the "little experiences of everyday life that fill most of our working time and occupy the vast majority of our conscious attention" (Wheeler & Reis, 1991). Through diary method, the researcher planned to gather data from teachers and students on the daily activities in the school and to triangulate the data obtained through other methods.

Diary design allows the investigator to examine the temporal sequencing of events and to control other variables by using participant as their own control. Diaries constitute an interesting and original form of empirical recording (Corbetta, 2003). Three diaries were arranged for the study, one each for students on HSS and VHSS, and the other one with HSS teacher. Investigator was unable to identify a willing VHSS teacher to assign the duty of writing daily diary.

One diary was kept by a higher secondary plus one student, who was instructed to write brief sentences for each day about what has happened on that day. These written diaries were augmented by phone calls. i.e., the researcher maintained daily contact with participants in a personal but non intrusive manner.

Another diary was kept with a vocational higher secondary student to write a summary of daily activities in school by following the guidelines provided. She recorded a brief summary of each day, referring to what she had done or experienced that day regarding the special activities in the school.

The diary for HSS teacher was kept by the researcher for recording the activities in higher secondary school as perceived by the teacher. The

investigator collected data from the respondent (Higher secondary school teacher) everyday either over phone or by direct contact.

Sample

The quality of a piece of research stands or falls not only by the appropriateness of methodology and instrumentation, but also by the suitability of the sampling strategy that has been adopted (Morrison, 1993). The data for the present study was collected from the selected higher secondary schools in Kerala belonging to rural, urban, coastal and tribal areas. Sampling is the process of selecting a few from a bigger group to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group (Kumar, 2005). The sampling technique used in this study was stratified random sampling technique. In stratified random sampling, the researcher stratified the population in such a way that the population within a stratum is homogeneous with respect to the characteristics on the basis on which it is being stratified. The population of the study included students, teachers, coordinators and principals of higher secondary schools and vocational higher secondary schools of Kerala and the sample was confined to Palakkad, Malappuram, Kozhikode, and Wayanad Districts of Kerala.

Sample Selected for the Study

The data for the present study was collected from select higher secondary schools belonging to rural, urban, coastal and tribal areas. The population includes students, teachers, coordinators and principals of all the higher secondary and vocational higher secondary schools in Kerala.

The sampling design was formulated by giving due importance to randomness and representation of different strata i.e., sample was selected giving due representation to all areas in Kerala using stratified sampling technique. Researcher stratified higher secondary level into two strata-higher secondary schools and vocational higher secondary schools. The sample was selected considering the basic principles of sampling. Emphasis was given to the sample size, and techniques and factors embodied in sampling.

Higher secondary education in Kerala offers courses in three streams namely, science, humanities, and commerce. The investigator included all the three streams to select sample from higher secondary schools in Kerala. For selecting higher secondary students, one batch from a school was randomly selected and all the students of the batch went into the sample.

Vocational Higher Secondary Education in Kerala offers 35 different courses. So it was impractical for the researcher to include students opting all those 35 courses in the sample for the study. So the students opting the most popular courses such as, Medical Laboratory Technology, Graphic Design and Printing Technology, Live Stock Management, Agricultural Science and Processing Technology, Agriculture-Crop Health Management, Computer Science, Information Technology, Travel and Tourism, Accounting and Taxation, Marine Fisheries and Sea Food Processing, Automobile Technology, and Civil Construction Technology was selected. One batch of Vocational Higher Secondary Students was randomly selected from each of these courses, and all the students of that batch were included in the sample.

The sample of the study also included teachers, principals and coordinators. The investigator took necessary care to ensure proper representation of the sample by giving adequate depiction to gender, locality, age, qualification, teaching experience and type of management of institution. Data was collected from principals and ASAP coordinators of the higher secondary schools in Kerala. The investigator visited higher secondary and vocational higher secondary schools for observing facilities available in the school.

The list of schools is given as Appendix I. The breakup of final sample is given in Table 14.

Table 14

Sample Selected for the Study

Sl. No	Category		Government	Aided	Unaided	Total
1	Principals	HSS	37	21	9	67
2		VHSS	13	3		16
3	Teachers	HSS	87	44	14	145
4		VHSS	30	7		37
5	Students	HSS	508	145	62	715
6		VHSS	201	176		377

Techniques and Tools Employed for the Study

Techniques Used for the Study

Techniques such as interview and observation were employed for collecting data for the study.

Interview

Interview method is one of the traditional method used for data collection. This method is widely used in the studies on political behaviour, administrator's perceptions, market operations etc. (Sharma, Prasad & Satyanarayana, 1986).

Interview was conducted to collect data from RDD (Regional Deputy Director) regarding their opinion about Higher Secondary Education in Kerala. A scientifically structured interview schedule was prepared and used for this purpose. In order to know the effectiveness of higher secondary education and vocational higher secondary education, the investigator conducted interview with principals of higher secondary and vocational higher secondary schools in Kerala.

Observation

Observation entails the systematic description of events, behaviors and artifact in the social setting chosen for study (Marshall & Rossman, 2011). It is a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place (Renjith, 2014). Under the observation method, the information was obtained by the investigator's own observation without asking the respondent. It is the most appropriate method for ascertaining the functions performed and facilities available in higher secondary schools. Observational data are sensitive to contexts and demonstrate strong ecological validity (Moyles, 2002). Patton (1990) suggested that observational data should enable the researcher to enter and understand the situation that is being described.

Finding out the facilities available in higher secondary schools was one of the objectives of the present study. The investigator decided to use observation method for this purpose. The investigator directly observed the higher secondary schools using the observation schedule prepared on the basis of specific criteria and facts were recorded.

Tools used for the Study

Different tools were used for collecting the data required for the study.

Questionnaire

- Questionnaire on Higher Secondary Education System for Higher Secondary Teachers (Anitha & Nath, 2014)
- Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Teachers (Anitha & Nath, 2014)
- Questionnaire on Higher Secondary Education System for Higher Secondary Students (Anitha & Nath, 2014)
- Questionnaire on Vocational Higher Secondary Education System for vocational Higher Secondary Students (Anitha & Nath, 2014)

Diary

- Diary of higher secondary student
- Diary of vocational higher secondary student
- Diary of higher secondary teacher

Interview Schedule

- Interview schedule for Regional deputy director, HSE
- Interview schedule for higher secondary principal
- Interview schedule for vocational higher secondary principal
- Interview schedule for ASAP coordinator

Observation Schedule

- Observation schedule on facilities of higher secondary schools
- Observation schedule of facilities of vocational higher secondary schools

Description of Tools

Questionnaire

Questionnaire on Higher Secondary Education System for Higher Secondary Teachers (Anitha & Nath, 2014).

One of the major objectives of the investigation was to study the academic aspects of higher secondary teachers of Kerala. The investigator prepared this tool in consultation with the supervising teacher. Before preparing the tool, the investigator surveyed related literature and made discussion with experts in the field and teachers of higher secondary education for procuring appropriate theoretical knowledge. The investigator also referred various government orders and guidelines about higher secondary education.

The major purposes of constructing this tool were :

- To study the facilities available for teaching in higher secondary schools in Kerala

- To analyse the in-service training aspects of higher secondary education
- To identify various activities in higher secondary schools
- To analyse various aspects like school administration, time schedule, PTA, etc.
- To identify the deficiencies if any in higher secondary education and to get suggestion for improving the system

Before preparing the questionnaire, the investigator analyzed the related literature and materials, and discussions were made with supervising teacher and experts in the field of higher secondary education.

The questionnaire had two sections. Section A of the questionnaire was meant for the collection of personal data of the teachers to whom the questionnaire was administered. This section included seven items. Section B of the tool was to collect data regarding the facilities available, library facilities, curriculum, text books, laboratories, individual attention, teacher training, other activities, school administration, PTA, duties other than academic activities and suggestions for strengthening of higher secondary education. One of the objectives of the study was to identify deficiencies in higher secondary education in Kerala and to suggest remedial measures. Adequate space was given in the tool to write the response in brief.

In the present study, a questionnaire with 62 questions was used. There were 41 closed type questions. Teachers had to mark their answer to which they had to respond a 'Yes' or 'No'. There were 12 open ended questions. Some of the questions had sub sections of both closed and open form. The questions in the questionnaire were developed from 14 areas. The area wise distribution of questions is given in Table 15.

Table 15

Area wise Distribution of Questions in Questionnaire to HSS Teachers

Sl. No.	Area	Item No	Closed items	Open items	Open and closed items	Total No
1	Library facilities	1-3	1, 2		3	3
2	Curriculum	4-10	5, 6, 7, 9, 10	8	4	7
3	Text book	11-24	11, 12, 14, 15, 16, 18, 19, 20, 21, 22, 23	13,17	24	14
4	Laboratory facilities	25-29	27, 28	25,26	29	5
5	Attendance	30-32	30, 31		32	3
6	Individual attention	33-37	33,34, 35, 36, 37			5
7	Evaluation	38-48	38, 39,40 41, 42, 44, 46, 48	43,47	45	11
8	Teacher training	49-53	50, 52	51,53	49	5
9	Other activities	54	54			1
10	School administration	55-56	55	56		2
11	Change in Working Days and Time	57	--		57	1
12	PTA	58-60	58, 59		60	3
13	Duties other than academic work and	61	--	61		1
14	Suggestions	62	--	62		1

Table 15 shows that there were questions from fourteen areas such as library facilities, curriculum, text book, laboratory, attendance, individual attention, evaluation, teacher training, other activities, school administration, time, PTA, and other duties and suggestions.

Information regarding these fourteen areas was gathered using this tool.

i. Part A

Part A of the tool consisted of items to collect the personal data of the higher secondary teachers such as type of school, gender, educational qualification, subject taught, and teaching experience.

ii. Part B

Part B consisted of items to obtain data on the academic aspects of teachers such as

- a) Availability and Utilisation of physical facilities such as library and laboratory
- b) Curriculum and syllabus
- c) Text book
- d) Attendance of students
- e) Individual attention
- f) Evaluation
- g) Teacher training
- h) Other activities
- i) School administration
- j) Change in working days and time
- k) PTA
- l) Duties Other than academic work
- m) Suggestions

Part A

This part provided information regarding type of school, gender, educational qualification and subject taught. It consisted of six items, of which, two items are closed, i.e. the respondent has to select from the alternatives given.

Part B

This part aims to get perception of teachers about academic aspects of higher secondary education in Kerala.

Availability and Utilisation of Physical Infrastructure

This sub section of the tool aimed to get an overall picture about availability and utilization of physical infrastructure in higher secondary schools of Kerala. This subsection included items distributed under different categories such as library facilities and laboratory facilities.

Library Facilities

This area included three items to get information regarding availability of resources, encouragement of reading, utilization of library facilities, and problems in utilization.

The academic aspects of library facilities can be measured by four items in which three 'yes or no' type items and one free response item were included. The last item was to collect information regarding problems in utilizing library facilities by higher secondary students.

Laboratory Facilities

This area included five items to measure the various aspects of laboratory facilities, difficulty in laboratory functioning, and to analyse the shortcomings. The data regarding the number of students in a batch and laboratory, difficulty in providing instruction, level of performance and shortcomings in the laboratory were collected.

Curriculum

This sub section was intended to get an overall picture about the adequacy, effectiveness, and relevance of the higher secondary curriculum. Seven items were constructed under this section each with a specific purpose. Items were included to know about the adequacy of existing curriculum, suggestions for improvement, effectiveness and constraints in student centered teaching, time and constraints for advance preparation, attainment of minimum level of learning and time for remedial lessons.

Text Book

This section of the tool seeks information about higher secondary text book, and related aspects like hand books, teaching aids, and syllabus. The items seek information about effectiveness of text book for planning classroom instruction, appropriateness of text book for acquiring the objectives, organization, presentation, physical aspects and mechanical make up, availability of hand books, availability and utilization of modern technology, opinion about syllabus, availability of time for curriculum transaction, reasons for time inadequacy, and availability of audio visual aids.

Attendance

Items included in this sub section meant to collect information regarding punctuality of students, proper administration of attendance register, and whether any irregularity problems exist and its details. This item is constructed to check the attendance, keeping an eye on the higher secondary education system.

Individual Attention

A total of five questions were constructed in this sub section. The first two items seek information about whether the teacher gave individual attention to students, and whether teacher repeats difficult portion in the class. The remaining items seek the opinion regarding measures adopted by the teacher to handle below average and gifted students in the class. The last item in this section is to collect the opinion of teachers about how the existing teacher pupil ratio affects individual attention.

Evaluation

In any education system, evaluation forms an integral part. So, the investigator included eleven items to assess the evaluation process in higher secondary education. The first item seeks information regarding self-evaluation and the procedure adopted for self evaluation. The second item intend to obtain information about unit tests. The third item seeks information about whether valued answer sheets are given back to the students in time. The fourth item collect information whether the teacher maintain students' profile. The fifth item intends to know whether the teacher ensure the objectivity of testing. Data regarding the problems in ensuring the objectivity

of testing is obtained using the sixth item. Constraints in evaluating students' performance can be obtained by the seventh item. The Eighth item is to know whether the valuation camp during vacation create difficulties to teachers and the second part of this item collects data about the types of difficulties. The ninth item checks whether camp evaluation is effective or not and the tenth item is to write the suggestions for effective camp valuation. Data regarding the constraints in continuous and comprehensive evaluation is obtained by eleventh item.

Teacher Training

Teacher training is an integral part of professional preparation. The investigator included five items to evaluate the teacher training programmes offered to higher secondary teachers. The first item seeks information regarding whether the higher secondary teachers had attended any training programme for managing adolescent students and the second part was to know the nature and duration of such training. The second item collects information about in-service courses and its details like duration, course name, providing agency, and benefit of the course. Data regarding shortcomings of training are collected using the third item. The fourth item seek information regarding the time interval required by teachers for in-service courses and the next item is to write the areas which require special training.

Other Activities

This section of the tool seeks information about the important clubs and other programmes functioning in higher secondary schools. Data regarding functioning of various clubs and programmes were collected using this item.

School Administration

To measure the effectiveness of school administration, two items were constructed in which the first item check whether the teacher is satisfied with the general discipline in the school and the next item collects data regarding suggestion to improve school discipline.

Change in Working days and Working Time

This section of the tool was meant to collect information about whether the change in the time schedule is effective and to identify problems in the new time schedule for higher secondary schools.

Parent Teachers Association (PTA)

PTA acts as a support for school education through various activities. The PTA activities were evaluated by three items under this sub section. The first item seeks information about whether the PTA performs efficiently in higher secondary schools and the next item check whether it support various activities of school. The third item seeks information about whether the teachers are satisfied with the functioning of PTA, and reasons for dissatisfaction if any.

Duties other than Academic Work

This section of the tool is constructed to collect information about other duties performed by the teachers in addition to teaching.

Suggestions for improvement

One of the major objectives of this study is to locate the deficiencies in higher secondary education in Kerala and suggestions for improvement. This

item seeks opinion regarding higher secondary education in Kerala and suggestions for improvement. Adequate space is given in the tool to write the opinion and suggestions.

Mode of answering questionnaire

In the questionnaire, two responses namely “yes” and “no” are given against each item. Boxes were provided against each item and the respondent had to put a tick mark (✓) in the relevant box. The respondents were instructed to write responses briefly for open ended items.

Scoring

Nature of response and its frequency were directly calculated for closed items. In the case of open items, the responses were pooled and categorized and the frequency of responses in each category was tabulated.

Validity and reliability

In qualitative data, validity might be addressed through honesty, depth, richness, and scope of the data achieved, the participants approached, the extent of triangulation and the disinterest or objectivity of the researcher (Winter, 2000). Agar (1993) claims that, in qualitative data collection, the intensive personal involvement and in depth responses of individuals secure a sufficient level of validity and reliability. Reliability is a degree of accuracy and comprehensiveness of coverage (Bogdan & Biklen, 1992).

To demonstrate content validity, the instrument must show that it fairly and comprehensively covers the domain or items that it purports to cover (Cohen, Manion & Morrison, 2010).

The questionnaire to higher secondary teachers contains independent questions, each dealing with specific aspects of the overall situation in higher secondary system. The questionnaire to higher secondary teachers was constructed by referring authentic literature and the guidelines issued by the directorate of higher secondary education, Kerala. Investigator tried to achieve adequate coverage of the whole area. The estimate was that the synthesis of the answers of individual item would present the total picture of higher secondary education system. A questionnaire is valid if it truly measures the area for which it has been developed. The investigator believed that the tool has adequate content validity.

Face validity is judgment by the scientific community that the indicator really measures the construct (Neuman, 2008). In addition to this tool was judged for its adequacy by experts in the field of higher secondary education. The investigator hoped that the data gathered by this tool had adequate face validity.

Triangulation of data obtained using this tool was done with the data obtained through other tools of the study to ascertain the reliability of the data gathered.

A copy of Questionnaire on Higher Secondary Education System for Higher Secondary Teachers (Anitha & Nath, 2014) is presented as Appendix III.

Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Teachers.

The investigator developed a questionnaire with the help of supervising teacher to collect data from vocational higher secondary teachers about various academic aspects of vocational higher secondary education. The investigator constructed this tool by referring journal, guidelines for higher secondary education, government orders, and other related materials. The investigator consulted the administrators, principals, experts and teachers in vocational higher secondary education. Experts in the area of vocational education verified each statement in the tool and ensured its utility.

The main purposes of constructing this tool were :

- To study the facilities available for teaching in vocational higher secondary schools in Kerala.
- To analyse the in-service training aspects of vocational higher secondary education.
- To identify various activities in vocational higher secondary schools.
- To analyse various aspects like school administration, PTA, Duties other than academic work etc.
- To identify the deficiencies if any in vocational higher secondary education and to get suggestion for improvement of the system.

Information about the following areas was gathered by this tool.

The questionnaire had two sections. Section A of the questionnaire was meant for the collection of personal data of the VHSS teachers. This

section includes seven items. Section B of the tool is to collect data regarding the academic aspects like the facilities available, library facilities, curriculum, text books, laboratories, individual attention, teacher training, other activities, school administration, PTA, other duties and suggestions for strengthening of vocational higher secondary education. One of the objectives of the study is to locate deficiencies in vocational higher secondary education in Kerala and to suggest remedies.

Questionnaire to VHSE teachers include closed, and open type items. Boxes were provided against each item for closed type questions, and the respondents have to put a tick mark in the appropriate boxes. Adequate space was given for open type questions in the tool to write the responses in brief.

In the present study, questionnaire with 81 questions were used to gather data from Vocational higher secondary teachers. There were 56 closed type questions. Teachers could select 'yes' or 'no' as answers. There were 12 open ended questions. 13 questions contain both closed and open form. The questions included in the questionnaire were from 19 areas. The area wise distribution of questions are given in Table 16

Table 16

Area wise Distribution of Questions for Vocational Higher Secondary Teachers

Sl. No	Area	Item No	Closed items	Open items	Open & Closed Items	Total No
1	Library facilities	1-3	1, 2	--	3	3
2	Curriculum	4-10	5, 6, 7, 9, 10	8	4	7
3	Text book	11-24	11, 12, 14, 15, 16, 18, 19, 20, 21, 22, 23	13,17	24	14
5	Lab facilities	25-29	27, 28	25,26	29	5
6	Attendance	30-32	30, 31	--	32	3
7	Individual attention	33-37	33, 34, 35, 36, 37	--	--	5
8	Evaluation	38-48	38, 39, 40, 41, 42, 44, 46, 48	43,47	45	11
9	Teacher training	49-53	50, 52	51,53	49	5
10	Club activities	54	54	--	--	1
11	School administration	55-56	55	56	--	2
12	PTA	57-59	57, 58	--	59	3
13	Duties other than academic work	60		60	--	1
14	Status of VHSE courses	61-67	61, 62,63, 64, 65, 66, 67	--	--	7
15	VHSE & higher education	68-71	70, 71	--	68, 69	4
16	Motives to VHSE	72-75	72	--	73, 74,75	4
18	Human resource empowerment	76-80	76, 77, 78, 79, 80	--	--	5
19	Suggestions	81		81	--	1

Table 16 shows that there were questions from nineteen areas such as library facilities, curriculum, text book, lab, attendance, individual attention, evaluation, teacher training, other activities, school administration, PTA, other duties, status of course, higher education, attractions to courses, training needs, promotion and related issues, and suggestions.

Information regarding nineteen areas was gathered by this tool.

i. Part A

Part A is meant for the collection of personal data of the vocational higher secondary teachers such as type of school, gender, educational qualification, subject taught, and teaching experience.

ii. Part B

Part B is meant for the collection of data on academic aspects of vocational higher secondary teachers such as

- a. Availability and Utilisation of physical facilities such as library facilities and laboratory
- b. Curriculum and syllabus
- c. Text book
- d. Attendance
- e. Individual attention
- f. Evaluation
- g. Teacher training
- h. Club activities
- i. School administration
- j. PTA

- k. Duties other than academic work
- l. Status of VHSE courses
- m. Attraction to VHSE
- n. Human resource empowerment
- o. Suggestions

Part A

This part provided information regarding type of school, gender, educational qualification and subject taught. It consisted of six items, in which two questions are closed, i.e. the respondent has to select one from the alternatives given.

Part B

This part aims to gather perception of teachers about academic aspects of vocational higher secondary education in Kerala.

Availability and Utilisation of Physical Infrastructure

This sub section of the tool aims to get an overall picture about availability and utilization of physical infrastructure of vocational higher secondary schools in Kerala. This subsection includes number of items distributed under different categories such as library facilities and laboratory facilities.

Library facilities

This category includes three items to get information regarding availability of resources, encouragement of reading habit, utilization, and problems in utilization of library facilities.

The academic aspects of library facilities can be measured by four items in which two “yes” or “no” type items and one item with both open and closed form response were included. The last item is to collect information regarding problems in utilizing library facilities by higher secondary students.

Laboratory facilities

The five items under this section aimed to measure the aspects of laboratories, difficulty in functioning, and to analyse the shortcomings in the lab. Here, the number of students accommodated in a batch and laboratory, difficulty in providing instruction, level of performance and short comings in the laboratory can be evaluated.

Curriculum

This sub section aimed to get an overall picture about the adequacy, effectiveness, and relevance of the vocational higher secondary curriculum. Seven items are constructed under this section each with the specific purpose. Items are included to know about adequacy of existing curriculum, suggestions for improvement, effectiveness and constraints in student centered teaching, time and constraints for advance preparation, attainment of minimum level of learning and time for remedial lessons.

Text Book

This section of the tool seeks information about Vocational higher secondary text book, and related aspects like hand books, teaching aids, and syllabus. The items seek information about effectiveness of text book for planning class room instruction, appropriateness of text book for acquiring

the objectives, its organization, presentation, physical aspects, mechanical make up, whether hand books available, availability and utilization of modern technologies, opinion about syllabus, availability of time for curriculum transaction, reasons for inadequate time, and availability of audio visual aids.

Attendance

Items included in this sub section collect information regarding punctuality of students, proper administration of attendance, and whether there are any irregularity problems and its details. This item is constructed to check the attendance keeping system in higher secondary.

Individual Attention

A total of five questions are constructed in this sub section. The first two items seek information about whether the teacher gives individual attention to students, and whether teacher repeat difficult portion in the class. The remaining items seek the opinion regarding measures adopted by the teacher to handle below average and gifted students in the class. The last item in this section is given to collect the opinion of teachers about how the existing teacher pupil ratio affects individual attention.

Evaluation

Evaluation forms an integral part of any education system. So the investigator included eleven items to gather data on the evaluation process in vocational higher secondary. The first item seeks information regarding self evaluation and procedure adopted for self evaluation. The second item intend to obtain information about unit test. The third item seeks

information about whether valued answer sheets are given back to students in time. The fourth item collect information whether the teacher maintain students' profile. The fifth item intends to obtain whether the teacher ensure objectivity of test. Data regarding the problems in ensuring the objectivity of test is obtained by sixth item. Constraints in evaluating student performance can be obtained by seventh item. The seventh item is to know whether the valuation camp during vacation create difficulties to teachers and the second part of this item collects data about types of difficulties. The ninth item check whether the camp valuation is effective or not and the tenth item is to write the suggestions for effective camp valuation. Data regarding the constraints in continuous and comprehensive evaluation is obtained by eleventh item.

Teacher Training

Teacher training is an integral part of professional preparation. The investigator included five items to evaluate the teacher training programmes to vocational higher secondary teachers. The first item seeks information regarding whether the vocational higher secondary teachers attended any training programmes for managing adolescent students and the second part is to know the nature and duration of such training. The second item collect information about in-service courses and its details like duration, course name, providing agency, and benefit of the course. Data regarding shortcomings of training is collected by third item. The fourth item seek information regarding the time interval needed by teachers for in-service courses and the next item is to write the areas which require special training.

Club Activities

This section of the tool seeks information about the important clubs and programmes functioning in vocational higher secondary schools. Availability and effective functioning of various clubs and programmes are evaluated using this item.

School Administration

To measure the effectiveness of school administration, two items are constructed, in which the first item check whether the teacher is satisfied with the general discipline in the school and the next item collects data regarding suggestions to improve school discipline.

Parent Teacher Association (PTA)

The PTA activities were evaluated by three items under this sub section. The first item seeks information about whether the PTA performs efficiently in vocational higher secondary schools and the next item check whether it support various activities of school. The third item seeks information about whether the teachers are satisfied with the functioning of PTA and to collect the reasons for dissatisfaction if any.

Duties other than academic work

This section of the tool is constructed to collect information about other duties performed by the teachers in addition to teaching.

Status of VHSE

The status of vocational higher secondary education was collected by seven items constructed each with a specific purpose under this sub division.

The first item seeks information about whether the students select vocational higher secondary as a last option. The second item intends to obtain the reasons to select VHSE as a last option. The third item seeks information regarding whether the students have any misconception about the status of VHSE. The fourth item collects data about whether the HSE got more preference than VHSE. The fifth item collects data regarding whether the VHSE students face any problems for applying jobs and higher studies. The sixth item is to know regional practical significance of VHSE courses and the last item seeks information about whether the existing VHSE courses are outdated.

VHSE and higher education

The first item is to know whether there is any equivalency and recognition problems to any VHSE course. The second item checks whether there is any difficulties for getting admission to higher studies and second part of this item specify the problems. The third item seeks information about whether adequate facilities for advanced studies to VHSE students. The fourth item seeks information regarding job opportunity to VHSE students.

Attraction to VHSE

The investigator included four items under this sub section. First item aims to know about the incentives required to attract students to VHSE. The second item evaluate whether there is any need for innovative courses and the areas of preferences. The third item is a ‘Yes’ or ‘No’ type and is to check

adequate cooperation obtained from skill providers. The fourth item is to know about the availability of authentic text book and how to manage this constraint in the absence of authentic text book.

Human resource empowerment

This section of the tool constructed seeks information about availability of in-service programmes to VHSE and its details, Special rule and VHSE teachers' promotion, efficiency of teacher association, efficiency of DVHSE in managing academic and administrative affairs, and influence of ASAP on VHSE.

Opinion and Suggestions

The last item in the tool seeks suggestions for the improvement of system. Adequate space is given in the tool to write the opinion about VHSE and suggestion for improvement of the system.

Mode of answering questionnaire

In the questionnaire, two responses namely "yes" and "no" were given against each item. Boxes were provided against each item and the respondent had to put a tick mark in the appropriate box. The respondents were instructed to write responses briefly for open ended items.

Scoring

Nature of response and its frequency were directly calculated for closed items. In the case of open items, the responses were pooled and

categorized and the frequencies of responses in each category were tabulated.

Validity and reliability

The questionnaire to vocational higher secondary teachers contains independent questions, each dealing with specific aspects of the overall situation in vocational higher secondary system. The questionnaire to vocational higher secondary teachers was constructed by referring the books and the guidelines issued by the directorate of vocational higher secondary education. Investigator tried to achieve adequate coverage of the whole area. The estimate was that the synthesis of the answers of each individual item would present the total picture of vocational higher secondary education system. A questionnaire is valid if it truly measures the area for which it has been developed. The investigator believed that the tools have adequate content validity.

In addition to this, tool was judged for its adequacy by experts in the field of vocational higher secondary education. The investigator hoped that the data gathered by this tool were adequate face validity.

Triangulation of data obtained using this tool was done with other tools of the study to ascertain the reliability of the data gathered by this tool.

A copy of Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Teachers (Anitha & Nath, 2014) is presented as Appendix III.

Questionnaire on Higher Secondary Education System for Higher Secondary Students (Anitha & Nath, 2014)

One of the major objectives of this study is to find out the response of higher secondary students regarding various aspects. In order to collect data from higher secondary students a questionnaire was prepared by the investigator together with her supervising teacher based on the objectives of the study. This was carried out after a detailed discussion with higher secondary teachers, experts, educational administrators and supervising teacher. In addition to this, various documents and publications were examined in-depth.

The main purposes of constructing this tool were the following:-

- To know about the availability and utilization of facilities for learning
- To know about the examination system followed in higher secondary
- To identify the response of students about the system
- To locate the problems if any in higher secondary education

Before preparing the questionnaire the investigator analyzed the related literature and materials and discussions were made with supervising teacher and experts in the field of higher secondary education.

Thus the investigator developed a questionnaire incorporating the following components :

1. Course selection
2. Medium of instruction
3. Physical facilities
4. Evaluation
5. Guidance needs
6. Activities organized in the school
7. Academic performance
8. Problems faced by the students

This tool was constructed under two sections: Section A and section B.

Section A

Section A of the questionnaire was meant for the collection of personal data of the students to whom the questionnaire was administered.

Section B

Section B of the tool is to collect data regarding the course selection, medium of instruction, physical facilities, evaluation, guidance , activities organized in the school, academic performance, and problems faced by the students.

Questionnaire to higher secondary students include closed, open and mixed type questions. In the case of closed type questions, boxes were provided against each item and the respondent has to put a tick mark in the box which is appropriate. In the case of open type questions, adequate space is given in the tool to write the response in brief. In the case of mixed type questions boxes and spaces were provided.

In the present study, a questionnaire with 57 questions was used. There were 48 closed type questions. Students could select “yes” or “no” as answers. There were 2 open ended questions. 7 questions were open and closed. The question included in the questionnaire was from 11 areas. The area wise distribution of questions are given in Table 17.

Table 17

Area wise Distribution of Questions in Questionnaire to HSS students

Sl No	Area	Item No	Closed items	Open items	Mixed items	Total No	
1	Course selection	1-2	1, 2	--	--	2	
2	Medium of instruction	3-6	3, 5, 6	--	4	4	
3	Physical facilities	Library	7-12	7, 8, 9, 10, 11,12	--	--	25
		Laboratory	13-18	13, 15, 16, 17	--	14, 18	
		Computer lab	19-24	19, 20, 21, 22, 23	--	24	
		Physical education	25-29	25, 27, 28	--	26, 29	
		Toilet facilities	30-31	30	31	--	
4	Evaluation	32-35	32, 33, 34, 35	--	--	4	
5	Learning activities	36-43	36, 37, 38, 39, 40, 41, 42, 43	--	--	8	
6	Counseling and training programmes	44-47	44, 45, 46, 47	--	--	4	
7	Participation in club activities	48	48	--	--	1	
8	Text book	49-50	49, 50	--	--	2	
9	Change in working days and time	51-52	51, 52	--	--	2	
10	ASAP	53-56	53, 54, 55	--	56	4	
11	Problems/Suggestions	57		57		1	

Table 17 shows that there were questions from eleven areas such as course selection, medium, infrastructural facilities, evaluation, learning activities, guidance and counseling, other activities, textbook, Change in working days and time, ASAP and problems faced by them.

Course Selection

Items included in this category collect information regarding whether the student got admission in the course of interest and whether the respondent seeks admission to the course selected for HSE.

Medium of Instruction

This section of the tool is constructed to seek information about the medium of instruction at high school level and whether change in medium of instruction create learning difficulties and how the students clarify doubts. The first item seeks information about the medium of instruction during high school period. The second item intends to know whether change in the medium of instruction creates learning difficulties and how it affects learning. The third item intends to obtain the procedure adopted by students for clarifying doubts. The fourth item collects data regarding teachers support and cooperation for clarifying doubts.

Physical Facilities

One of the purposes of the study is to investigate the infrastructural facilities in higher secondary schools. So, this section seek information about the physical facilities in higher secondary schools. So, the investigator included facilities like library, laboratory, computer lab, physical education, and toilet facilities.

Library facilities

Data regarding effectiveness of library facilities were collected in this section. The first item seeks information regarding whether adequate library facilities were available in higher secondary schools. The second item is to know whether resources are adequate. The third item checks whether students utilize it during free time. The fourth item seeks information about whether teachers motivate usage of library. The fifth item seeks information regarding library books distribution system in higher secondary level. The last item seeks information regarding constraints in utilizing library facilities efficiently.

Laboratory facilities

The investigator included six items in this sub section. First item aims to know about whether the laboratories work efficiently at higher secondary level. The second item evaluate whether the students utilize lab facilities in allotted time and the second part of this item intends to know the reasons for improper utilization of lab. The third item is to check whether adequate facilities were available in the laboratory. The fourth item is 'yes' or 'No' type and is to check whether the service of lab assistant is available to students. The fifth item is to know about whether the teachers provide directions in time. The last item seeks information about the performance of laboratory.

Computer lab

To measure the utility and availability of computer lab facilities of higher secondary schools, six items are constructed. First item checks whether the computer lab facilities are available to higher secondary students.

The second item seeks information regarding availability of adequate facilities. The third item is to know about availability of net connection in the lab. The fourth item seeks information about whether the service of instructor is available in the lab. The fifth item seeks information regarding practical periods. The last item seeks information regarding constraints in utilizing computer lab facility.

Physical education

Physical education can be evaluated by five questions. The first item seeks information regarding availability of physical education teacher in training students. The second item intends to obtain information about participation of students in sports. The third item collects data regarding availability of physical training programmes to students. The fourth item collects information about teachers' motivation to participate in sports.

Toilet facilities

Toilet facilities available for the students can be collected by two items made specifically for the purpose. The first item checks whether adequate toilet facilities were available to higher secondary students and the second item collects information regarding scarcity or inadequacy of toilets.

Evaluation

In this section the investigator included five items. The first item seeks information regarding administration of unit test. The second item intends to know the subjects where in unit tests were never conducted. Third item collects information about whether the valued answer sheets are given back to students in time and the second part collects information regarding subjects

which do not distribute answer sheets to students. Fourth item is to know whether more exams were required to assess academic excellence. And, the last item in this section is to check efficiency of evaluation system and also to check the reasons for inefficiency if any.

Learning Activities

In this subsection, the investigator included five sub sections such as Availability of teachers for teaching and guidance, Method of teaching adopted by teachers, Learning activities, Audio-Visual aids, and Teacher pupil relationship.

Availability of teachers for teaching and guidance

The items seek information regarding availability of teachers, in which teachers give directions to students.

Method of teaching adopted by teachers

Item constructed in this section is to check the teaching method followed in higher secondary schools.

Learning Activities

Item constructed in this section intends to know about the learning activities adopted in higher secondary class room.

Audio-Visual aids

Item constructed under this sub section is to know about the utilization of AV aids in higher secondary class room.

Teacher pupil relationship

This section of the tool is constructed to seek information about teacher pupil relationship, supervision of learning, availability of timely guidance to students.

Counselling and training programmes

Counselling

The availability and service of counselling to higher secondary schools can be identified by the items constructed in this subsection. The items check whether the school has a counselor, and whether services are rendered by the counselor.

Training programmes

Organisation and utilization of various training programmes to students can be identified by the items constructed with specific purpose under this sub section. Training programmes can be evaluated by two items. First item seeks information regarding organization of various training programmes in higher secondary schools and the participation of students in such programmes. Second item check benefits of such programmes.

Participation in clubs activities.

This section of the tool constructed to seek information about students membership in various clubs.

Text book.

The textbook can be evaluated by two items. The items seek information about language used, illustrations provided, ordering of contents and method used by students for selecting books.

Change in working days and time.

Reform in the time schedule could be evaluated by two items constructed each with specific purpose. The first item seeks information about effectiveness of new time structure and to collect data regarding difficulties due to new time schedule. The second item intends to obtain information regarding utilization of Saturday by higher secondary students.

Functioning of ASAP.

Functioning of ASAP in higher secondary schools can be evaluated by four items. The items seeks information regarding whether ASAP is functioned in school, whether student took membership in it, whether it facilitated the skill, whether it creates any learning burden, whether it facilitate skill attainment efficiently, and the limitations of ASAP course.

Suggestions/feedback for improvement.

One of the major objectives of the study is to locate deficiencies in higher secondary education in Kerala and suggest remedies. Adequate space was given in the tool to write the suggestions / responses in brief.

Mode of answering the questionnaire.

In the questionnaire, two responses namely “yes” and “no” were given against each item. Boxes were provided against each item and the respondent had to put a tick mark in the relevant box as appropriate. The respondents were instructed to write responses briefly for open ended items.

Scoring

Nature of response and its frequency were directly calculated for closed items. In the case of open items the responses were pooled and categorized and the frequency of response in each category were tabulated.

Validity and Reliability

The questionnaire to higher secondary students contains independent questions, each dealing with specific aspects of the overall situation in higher secondary system. The questionnaire to higher secondary students was constructed by referring the books and the guidelines issued by the directorate of higher secondary education. Investigator tried to achieve adequate coverage of the whole area. The estimate was that the synthesis of the answers of each individual item would present the total picture of higher secondary education system. A questionnaire is valid if it is truly measure the area for which it has been developed. The investigator believed that the tools have adequate content validity.

In addition to this, tool was judged for its adequacy by experts in the field of higher secondary education. The investigator hoped that the data gathered by this tool were adequate face validity.

Triangulation of data obtained using this tool was done with other tools of the study to ascertain the reliability of the data gathered by this tool.

A copy of Questionnaire on Higher Secondary Education System for Higher Secondary students (Anitha & Nath, 2014) is presented as Appendix IV.

Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Students (Anitha & Nath, 2014).

In order to collect data from vocational higher secondary students, a questionnaire was prepared by the investigator together with her supervising teacher based on the objective of the study. This was carried out after a detailed discussion with vocational higher secondary teachers, experts, educational administrators and supervising teacher. In addition to this various documents and publications were examined in-depth.

The main purposes of constructing this tool are the following:-

- To know about the availability and utilization of facilities for learning
- To know about the evaluation or examination system followed in vocational higher secondary
- To identify the reactions of students about the system
- To locate the problems in vocational higher secondary education (if any)

Thus the investigator developed a questionnaire incorporating the following components:

1. Course selection
2. Medium of instruction
3. Physical facilities
4. Evaluation
5. Guidance need
6. Activities organized in the school

7. Academic performance
8. Problems faced by the students

The questionnaire had two sections. Section A of the questionnaire was meant for the collection of personal data of the students to whom the questionnaire was administered. This section includes four items.

Section B of the tool is to collect data regarding the course selection, medium of instruction, physical facilities, evaluation, guidance need, activities organized in the school, academic performance, and problems faced by the students.

Questionnaire to vocational higher secondary students include closed as well as open type question. In the case of closed type question boxes were provided against each item and the respondent has to put tick mark in the box which is appropriate. In the case of open type questions adequate space is given in the tool to write the response in brief.

In the present study a questionnaire with 56 questions were used. There were 48 closed type questions. Students could select “yes” or “no” as answers. There were 2 open ended questions. 6 questions were having two or more subsections of both open and closed type of questions. The question included in the questionnaire was from 11 areas. The area wise distribution of questions is given in Table No 18.

Table 18

Area wise Distribution of Questions in Questionnaire to Vocational Higher Secondary Students

Sl. No	Area	Item No	Closed Items	Open Items	Mixed Items	Total No
1	Course selection	1-7	1, 2, 3, 4, 5, 6, 7			7
2	Medium	8-11	9, 10,11		8	4
3	Library	12-17	12, 13, 14, 15, 16, 17			6
	Lab	18-23	18,20,21,22		19,23	6
	Computer lab	24-29	24, 25, 26,27, 28		29	6
	Physical education	30-34	30, 32, 33		31,34	5
	Toilet facilities	35-36	35	36		2
4	Evaluation	37-40	37,38,39,40			4
5	Learning activities	41-48	41,42,43,44, 45,46,47,48			8
6	Guidance and counseling	49-50	49,50			2
7	Participation in training programmes	51-52	51, 52			2
8	Participation in club activities	53	53			1
9	Text book	54-55	54, 55			2
10	Problems /Suggestions	56		56		1

Table 18 shows that there were questions from nine areas such as course selection, medium, infrastructural facilities, evaluation, learning activities, guidance and counseling, other activities, textbook, and problems faced by them.

Course Selection

Items included in this category collect information regarding whether the student got admission for the interested course, whether vocational higher secondary helps to attain vocational aim of life, whether there are more chances to higher studies, like to join in the skill sector after completing VHSE and whether the respondent seeks admission to higher studies in the course selected for VHSE. The next item seeks information regarding reasons for selecting VHSE, reasons for not interested to join skill sector, and the future intention of VHSE students.

Medium of Instruction

This section of the tool constructed to seeks information about the medium of instruction at high school level and whether change in medium of instruction create learning difficulties and how the students clarify doubts. The first item seeks information about the medium of instruction during high school period. The second item intends to know whether change in the medium of instruction creates learning difficulties and how it affects learning. The third item intends to obtain the procedure adopted by students for clarifying doubts. The fourth item collects data regarding teachers support and cooperation for clarifying doubts.

Physical Facilities

One of the purposes of the study is to investigate the infrastructural facilities in vocational higher secondary schools. So this section of the tool is constructed to seek information about the physical facilities in vocational

higher secondary schools. So the investigator included facilities like library, laboratory, computer lab, physical education, and toilet facilities.

Library Facilities

Data regarding effectiveness of library facilities were collected in this section. The first item seeks information regarding whether adequate library facilities were available in higher secondary schools. The second item is to know whether resources are adequate. The third item checks whether students utilize it in free time. The fourth item seeks information about whether teachers motivate to use library facilities. The fifth item seeks information regarding library books distribution system in higher secondary. The last item seeks information regarding constraints in utilizing library facilities efficiently.

Laboratory Facilities

The investigator included six items in this sub section. First item aims to know about whether the laboratories work efficiently at higher secondary level. The second item evaluate whether the students utilize lab facilities in allotted time and the second part of this item intends to know the reasons for improper utilization of lab. The third item is to check whether adequate facilities were available in the laboratory. The fourth item is a 'yes' or 'No' type and is to check whether the service of lab assistant was available to students. The fourth item is to know about whether the teachers provide directions in time. The last item seeks information about performance of laboratory.

Computer Lab

To measure the availability and utilisation of computer lab facilities of higher secondary schools, six items were constructed. First item checks

whether the computer lab facilities are available to higher secondary students. The second item seeks information regarding adequate facilities that were available. The third item is to know about availability of internet connection in the lab. The fourth item seeks information about whether service of instructor is available in the lab. The fifth item seeks information regarding practical periods. The last item seeks information regarding constraints in utilizing computer lab facility.

Physical Education

Physical education section was evaluated using five questions. The first item seeks information regarding availability of physical education teacher in training to students. The second item intends to obtain participation of students in sports activities. The third item collects data regarding availability of training programmes to students. The fourth item collects information about teachers' motivation to participate in sports.

Toilet Facilities

Toilet facilities available for the students can be collected by two items made specifically for the purpose. The first item checks whether adequate toilet facilities were available to higher secondary students and the second item collects limitations of toilets.

Evaluation

In this section the investigator included five items. The first item seeks information regarding administration of unit test. The second item intends to know the subjects which never conduct unit tests. Third item collects information about whether the valued answer sheet are given back to students

in time and the second part collects the subjects which are not distributed answer sheets to students. Fourth item is to know whether more exams were required to assess the academic excellence. And the last item in this section is to check efficiency of evaluation system and also check the reasons for inefficiency.

Learning Activities

In this subsection the investigator included five sub sections such as Availability of teachers for teaching and guidance, Method of teaching adopted by teachers, Learning activities, AV aids, and Teacher pupil relationship.

Availability of teachers for teaching and guidance

The items seek information regarding availability of teachers, in which matters teachers give directions to students.

Method of teaching adopted by teacher

Items constructed in this section are to check the teaching method followed by teachers in higher secondary schools.

Learning Activities

Items constructed in this section intend to know about the learning activities adopted in higher secondary class room.

AV aids

Items constructed under this sub section are to know about the utilization of AV aids in higher secondary class room.

Teacher pupil relationship

This section of the tool constructed seeks information about teacher pupil relationship, supervision of learning, availability of timely guidance to students.

Counselling and training programmes

Counselling

The availability and service of counseling of vocational higher secondary schools can be identified by the items constructed in this subsection. The items checks whether the school has a counselor, and services rendered by the counselor.

Training programmes

Organization and utilization of various training programmes to students can be identified by the items constructed under this sub section. Training programmes can be evaluated by three items. First item seeks information regarding organization of various training programmes in higher secondary schools and the participation of students in such programmes. Second item check benefits of such programmes.

Participation in clubs activities

This section of the tool is constructed to seek information about students' membership in various clubs.

Text Book

The textbook can be evaluated by two items. The items seek information about language used, illustrations provided, ordering of contents and method used by students for selecting books.

Suggestions/ feedback for improvement

One of the major objectives of the study is to locate deficiencies in vocational higher secondary education in Kerala and suggest remedies. Adequate space is given in the tool to write the response in brief.

Mode of answering questionnaire

In the questionnaire, two responses namely “yes” and “no” were given against each item. Boxes were provided against each item and the respondent had to put a tick mark in the appropriate box. The respondents were instructed to write responses briefly for open ended items.

Scoring

Nature of response and its frequency were directly calculated for closed items. In the case of open items, the responses were pooled and categorized and the frequencies of response in each category were tabulated.

Validity and Reliability

The questionnaire to vocational higher secondary students contains independent questions, each dealing with specific aspects of the overall situation in vocational higher secondary system. The questionnaire to vocational higher secondary students was constructed by referring the books and the guidelines issued by the directorate of vocational higher secondary education. Investigator tried to achieve adequate coverage of the whole area. The estimate was that the synthesis of the answers of each item would present the total picture of vocational higher secondary education system. A questionnaire is valid if it truly measures the area for which it has been

developed. The investigator believed that the tools have adequate content validity.

In addition to this, the tool was judged for its adequacy by experts in the field of vocational higher secondary education. The investigator hoped that the data gathered by this tool will be of adequate validity.

Triangulation of data obtained using this tool was done with other tools of the study to ascertain the reliability of the data gathered by this tool.

A copy of Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary students (Anitha & Nath, 2014) is presented as Appendix V.

Diary

A diary was given to one student each of HSS and VHSS; and kept one for HSS teacher to record daily events.

Diary for higher secondary and Vocational higher Secondary Students.

Design of the diary in this study aimed to gather daily activities in the school. The diary used was a paper diary with the front page deliberately printed on bright colored paper to make it distinguishable. The second page included a brief summary of the research, a list of cues for the participants plus the researcher's contact details. The following pages were used for daily entries. One page was given for each day. At the top of each page there was a space for entering the date. The investigator explained what the respondents were expected to do and how to record the daily entries in the diary.

One diary was kept by higher secondary plus one student, who wrote daily activities briefly. These paper pencil diaries are augmented by phone calls. i.e., the researcher maintains ongoing contact with participants in a personal but in non intrusive manner.

Another diary was given to vocational higher secondary student to write a summary of daily activities by following the guidelines provided. Participant gives a brief record of each day referring to what she had done or experienced that day and special activities if any in the school. The researcher also maintains ongoing contact with participants in a personal yet non intrusive manner.

Design of the diary for higher secondary teacher

Design of the diary in this study was aimed to gather daily activity details. The diary was a paper diary with the front page deliberately printed on bright colour paper to make it distinguishable. The following pages were for daily entries. One page was given to each day. At the top of each page there was a space for writing date. Activities in the school were recalled at the end of the day with time based (daily) diaries, whereas, teaching and other duties were monitored with event based diaries. All these were recorded by the investigator. For this, the investigator collected data from the participant (Higher secondary teacher) everyday over phone or by direct contact. The investigator analyzed these for getting a longitudinal and correct picture of school activities.

Observation Schedule

Observation is one way to collect primary data. It is a purposeful, systematic and select way of watching and listening to an interaction or

phenomenon as it takes place. To find out the facilities available in higher secondary and vocational higher secondary schools is one of the objectives of the present study. The investigator decided to use observation method for this purpose. For this the investigator decided to visit and observe higher secondary schools. The investigator observed the facilities available, seating arrangement for second language classes, and academic performance. This information will validate the data obtained by other tools and it will act as a supplementary support of data collected for other objectives.

An observation schedule for higher secondary schools was prepared well in advance with the help of supervising teacher. The observation schedule includes relevant points about higher secondary school facilities. As and when the investigator visited the higher secondary and vocational higher secondary school for the administration of the questionnaire, and for conducting interviews, she also observed the facilities and activities in schools using an observation schedule. Investigator recorded the observed facts and analyzed it qualitatively.

Criteria for the preparation of observation schedules

The investigator identified the criteria on the basis of document analysis and discussion with experts. The criteria fixed for observing higher secondary school are presented in the tool in different sections and sub sections. They are as follows:-

General information

This section helps to provide information regarding the name of the school, revenue district in which the school is situated, educational district, and management of school.

Infrastructural facilities

One of the objectives of the study was to analyse the facilities available for higher secondary schools in Kerala. This section contains items under different sub divisions such as class room, library, labs, resource room, physical education, principal room, office room, staff room, store room, and student's rest room.

Class room

The items included in this section helps to get information about nature of partitioning, area, number of students accommodated, lighting facility, ventilation, fans, and details of furniture in the class room. The last item in this section is to write limitations of class room.

Library

The items included in this section are to get information regarding working hours of library, service of librarian is available or not, reading room facility and details of facilities and furniture available. The last item in this sub division is to write the limitations of the library.

Laboratory facilities

This sub division gathers information regarding time for lab work, separate lab for each stream, whether the service of lab assistant is available or not, and details of other facilities available in lab. In case of science subjects the theoretical concept must be supported by practical understanding. So a well planned and well equipped lab for each science subject separately is necessary for higher secondary education.

Computer facilities/ resource room

In this sub division, condition of computer room is checked. Information about whether the service of computer instructor is available, whether the lab is well equipped, number of computers available, and whether there is a separate lab for higher secondary students were obtained.

Facilities for Physical education

Physical education facilities available for higher secondary was observed for getting information regarding availability of physical education teacher, play ground, and sports and games materials.

Principal's room

General condition of principal's room was checked by two items i.e. whether there is a separate room for principal and furniture and facilities available.

Office room

The items included in this sub division check whether the office room is attached with principals room or not, whether it is electrified or not, internet connection is available or not, and whether the furniture available is adequate or not.

Staff room

Infrastructural facilities in the staff room was measured by six items such as electrified or not, furniture, writing facilities, book keeping facilities, document keeping facilities, and general facilities available in the staff room.

Store room

In this sub division, the investigator observed whether there is any facility for storing items.

Student's rest room

In this sub division, rest room facility available to students is evaluated. Number of toilets available, whether there is adequate water supply and adequate maintenance is checked. This section also includes limitations of resting room if any.

A copy of observation Schedule on Facilities of Higher Secondary Schools is given as Appendix VI, and an observation Schedule on Facilities of Vocational Higher Secondary Schools is given as Appendix VII.

Interview Schedules

Three interview schedules were prepared by the investigator in consultation with supervising teacher. Interview schedule for Regional Deputy Director of Higher Secondary Education, interview schedule for Principals, and interview schedule for ASAP coordinators.

Interview schedule for RDD

Interview schedule was used to collect data from RDD regarding their opinion about higher secondary education in Kerala. A scientifically structured interview schedule was prepared and used for this purpose. Questions of the schedule were framed so as to get data about different dimensions. It was mainly focused to get data about their views of the present system and suggestion for the improvement of higher secondary education. The main areas of the schedule were:

- De linking of pre degree course from colleges and prevalence of higher secondary
- Quality, accessibility and individual attention
- Resources
- Learning strategy
- Opportunities and threats for higher secondary students
- Administrative constraints
- Single window admission procedure
- Evaluation
- Problems if any and suggestions.

The main purpose of the interview schedule was to know the administrative aspects of authority. Interview schedule to RDD was a structured one and it contained 8 questions. It covered almost all areas of higher secondary administration. The investigator filled up the schedule during the interview according to the response. The investigator met the RDD in person for conducting the interview. Immediately after the interview, conclusion of the interview report was prepared by the investigator. The copy of interview schedule was given as Appendix VIII.

Interview Schedule for Higher Secondary Principal.

An interview schedule on the functioning of higher secondary schools was prepared for collecting the data about the effectiveness of higher secondary education. The main purpose of the interview schedule was to know the effectiveness of various activities and programmes in higher secondary schools in Kerala. The interview schedule consists of “yes” / “no” questions and open ended questions relating to the dimensions are given in Table 19

Table 19

Area wise Distribution of Questions in interview schedule for higher Secondary Principal

Sl. No	Area	Item No	Total
1	Location and Facilities of Higher Secondary Schools	1,2	2
2	Administration and constraints in teaching	3,4	2
3	Single window admission process	5,6	2
4	PTA	7,8,9,10	4
5	Cluster meeting	11	1
6	Management of open students	12	1
7	Fund and office management	13,14,15	3
8	Management of day to day activities	16,17,18	3
9	Training- Administrative training needs	19,20	2
10	Reform in working days and time	21	1
11	Opinion of Principals on higher secondary education system in Kerala and their suggestions for improvement	22	1

Open ended and closed ended questions were used in this interview. Open ended questions do not give respondents chance to choose answer. Closed ended questions allow respondents to choose from a set of questions. Probes were used throughout the interview to encourage respondents to add more information or clarity to their response. The researcher filled up the interview schedule during the interview according to their response.

Scoring

The responses of higher secondary principals collected through schedule were recorded and consolidated. The consolidated data were used for further analysis. Interviews were conducted personally by the investigator and the Schedule was filled up during the interview according to the interviewees' response. The copy of interview schedule was given as Appendix IX.

Interview schedule for vocational higher secondary school principal

Interview schedule was used to collect data from the vocational higher secondary principals regarding the functioning of vocational higher secondary education in Kerala. A scientifically structured interview schedule was prepared and used for this purpose.

An interview schedule on the functioning of vocational higher secondary education is prepared for collecting the data about the effectiveness of vocational higher secondary education in Kerala. The main purpose of the interview schedule was to know the effectiveness of various activities and programmes in vocational higher secondary education in Kerala. The interview schedule consist of “yes”/ “no” questions and open ended questions relating to the dimensions are given in Table 20.

Table 20

Area wise Distribution of Questions in Interview Schedule for VHSS Principal

Sl. No.	Area	Items	Total No
1	Location and Facilities of Higher Secondary Schools	1,2	2
2	Administration and constraints in teaching	3,4	2
3	Single window admission process	5,6	2
4	PTA	7,8,9	3
5	Cluster meeting	10	1
6	Fund and office management	11,12,13	3
7	Management of day to day activities	14,15,16	3
8	Training-Administrative training needs	17,18	2
9	Opinion of Principals on higher secondary education system in Kerala and their suggestions for improvement	19	1

Open ended and closed ended questions were used in this interview. Open ended questions do not give respondents chance to choose the answer. Closed ended questions allow respondents to choose from a set of questions. Probes were used throughout interview to encourage respondents to add more information or clarify their response. The researcher filled up the interview schedule during the interview according to participant response.

Scoring

The responses of vocational higher secondary principals collected using the schedule were recorded and consolidated. The consolidated data were used for further analysis. Interviews were conducted personally by the investigator and the schedule was filled up during the interview according to the participant response.

The copy of interview schedule was given as Appendix X.

Interview schedule to ASAP coordinator

The main purpose of the interview schedule to ASAP coordinator was to know the management and administrative aspects of ASAP. Interview schedule to ASAP coordinators was a structured one and it contained 5 questions. It covered almost all areas of ASAP.

Open ended questions were used in this interview. Open ended questions do not give interviewee a chance to choose answer. The investigator filled up the schedule during the interview according to the response of the interviewee. A copy of schedule is appended as Appendix No XI.

The sample selected as ASAP coordinators (7) were interviewed only after getting their prior appointment. The investigator contacted them in

person or through telephone for this purpose. Whenever possible, general idea about the study and nature of help expected of them were conveyed in advance. At the time of interview, their opinion was immediately recorded either in paper or recorded mechanically by the investigator.

Scoring

The responses of ASAP coordinator collected through schedule were recorded and consolidated. The consolidated data were used for further analysis. Interviews were conducted personally by the investigator and the schedule was filled up by the researcher during the interview according to the participant response.

Data Collection Procedure

In order to gather primary data, various tools have been administered. A pilot study was conducted to ensure the appropriateness of measuring tools. During the pilot study, the investigator administered the tools to select higher secondary and vocational higher secondary teachers and conducted semi structured interview with principals of the schools concerned. Detailed discussions with them helped the investigator to critically reflect on the present position and drawbacks of the higher secondary system. Data collected through pilot study led the way to develop final tools which was used during the data collection phase.

After fixing the sample to be used for the study, the investigator approached the principals of higher secondary and vocational higher secondary schools. After getting the permission from the principals, the investigator administered the questionnaire among higher secondary teachers.

While administering the tool to teachers, the purpose of the study, and the mode of answering were explained. Enough time was given for responding. The doubts raised by the teachers while giving responses were clarified. Most of the teachers weren't ready to fill the questionnaire on the same day. Hence, the investigator visited again to collect the filled up questionnaire.

Adequate numbers of higher secondary students were selected from sampled higher secondary schools and questionnaire was supplied to them. Filled up questionnaire was collected from students on the same day of its administration.

Before administering the tool, general instruction was given to students regarding the purpose and mode of answering the questionnaire. The students were given adequate time for answering the questionnaire. After administration, the questionnaire was collected back.

A structured interview schedule was administered to gather data from the RDD. Interviews were conducted personally by the investigator and the researcher filled up the schedule during the interview according to their response.

To know about the effectiveness of functioning of higher secondary schools, data were collected using an interview schedule and was administered to higher secondary principals. These samples were selected randomly from various districts. Interview was conducted personally by the investigator and the responses were recorded accordingly.

Observation schedule was used for direct assessment of school facilities. For making close observation, permission was sought from the

authority. The data collected through schedule was consolidated and compared with Government rules. The consolidated data were used for further analysis.

Scoring and Consolidation of the Data

Data were collected using questionnaire to higher secondary teachers, questionnaire to vocational higher secondary teachers, questionnaire to higher secondary students and questionnaire to vocational higher secondary students. These tools contained closed and open items. For the items of closed form, nature of responses and its frequencies were calculated. The responses of open type items were pooled and categorized and then the frequency of responses in each category was tabulated.

Data collected through interview schedule from RDD, higher secondary principals, vocational higher secondary principals, and ASAP coordinators were consolidated. The investigator used verbal description to analyse the data collected under various themes.

The data collected through observation schedule on facilities available in higher secondary and vocational higher secondary were consolidated. The consolidated data were used for further analysis.

Diaries of Students (HSS & VHSS) and higher secondary teacher contained entries for an academic year. Researcher read the diary entries carefully identifying events and /or factors mentioned in the diary. Then the number of time each event and / or factors was mentioned in the whole diary was computed. In counting the frequency of each factor/ event, whenever a factor or event was identified once or more than once in a single day's diary entry, its frequency of mentioning was computed as one.

Techniques for Analysis of Data

In this study, the investigator made use of percentage analysis for analyzing the data collected using the tools. This method was adopted to find out what percentage of the total subjects responded to each statement in the tool. The results obtained through percentage analysis were interpreted qualitatively by cross checking data obtained from different tools.

Questionnaires contained closed and open items. For the items of closed form, nature of responses and its frequencies were calculated. The investigator used verbal description to analyze the data collected through open ended items. Data consolidated from questionnaires were analyzed with the help of percentages.

Qualitative analysis was employed for analysis of data obtained from documents, observation schedules, diaries, and interview schedules.

Thematic analysis of data using verbal description of data was used to analyse documents, observation schedule and interview schedule.

Researcher read the diary entries carefully, identified events and factors mentioned in the diary. Then the number of time each event or factor was mentioned in the whole diary was thematically compiled. In counting the frequency of mention of each factor/ or event, whenever a factor or event was identified once or more than once in a single day's diary entry, its frequency of mention was computed as one. Thematic interpretation of data from the diary was done by using verbal descriptions of events.

Chapter IV
ANALYSIS
AND INTERPRETATIONS

- *Analysis of Data*
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ANALYSIS AND INTERPRETATIONS

The major objective of the present study has been to examine critically the higher secondary education system in Kerala. The objective behind this chapter is to assert how principals, teachers, RDD, coordinators and students look up on the present system of education at higher secondary level in Kerala. This chapter deals with the analysis of the data collected for the present investigation using various tools specially intended for the study. Higher secondary system were analysed and compared using the data gathered from RDD, teachers, students, and heads of the select higher secondary schools by administering questionnaire, observation schedule, interview schedule, Diaries and documents.

The analysis has been done as per the major objectives set for the study. The analysis of data was done in the following parts A to F.

Part A

- Responses of principals of higher secondary schools in Kerala
- Responses of principals of vocational higher secondary schools in Kerala.

Part B

- Responses of teachers of higher secondary schools in Kerala
- Responses of teachers of vocational higher secondary schools in Kerala

Part C

- Responses of students of higher secondary schools in Kerala
- Responses of students of vocational higher secondary schools in Kerala

Part D

- Responses of RDD of higher secondary schools in Kerala
- Responses of ASAP coordinators of higher secondary schools in Kerala

Part E

- Observation of facilities in higher secondary schools
- Observation of facilities in vocational higher secondary schools.

Part F

- Analysis of Diary of higher secondary teacher, HSS and VHSS Students

First section (Part A) deals with the responses of the principals with regard to the various dimensions of the objective were analysed. Second section (Part B) deals with the analysis of dimensions based on the opinion scores collected from higher secondary and vocational higher secondary teachers. Next section (Part C) deals with the analysis of dimensions based on the opinion of higher secondary and vocational higher secondary students. Next section (Part D) deals with the analysis of data collected through the interview of administrators of the higher secondary education programme. Next section (Part E) deals with the observation of facilities in higher secondary and vocational higher secondary schools. The last section (Part F) deals with analysis of diaries of higher secondary teacher, higher secondary student, and vocational higher secondary student. The results are presented under various sub heads as per the dimensions of higher secondary education system under study.

Part A

Responses of Principals of Higher Secondary Schools in Kerala

The researcher had personally contacted 67 principals and collected information regarding their views, problems and suggestions about higher secondary education in Kerala. The data collected through interview schedule meant for higher secondary principals were analysed and interpreted under respective dimensions as follows.

Location and Facilities of Higher Secondary Schools

Data regarding accessibility of school location, infrastructure facilities and scarcities were collected and analysed under facilities available and are presented in Table 21.

Table 21

Location and Facilities of Higher Secondary Schools

Sl. No	Items	Type of Management	Total Responses	
			Yes	No
1	Accessibility of Location	Govt.	31 (83.78)	6 (16.22)
		Aided	19 (90.48)	2 (9.52)
		Unaided	9 (100)	0
		Total	59 (88.06)	8 (11.94)
2	Satisfied with Infrastructure Facilities	Govt	2 (5.41)	35 (94.59)
		Aided	18 (85.71)	3 (14.29)
		Unaided	9 (100)	0
		Total	29 (43.28)	38 (56.72)

Table 21 reveals that 83.78% of Government higher secondary principals, 90.48% of aided principals and all of unaided principals argued that their school's location was easily accessible.

Many researches have shown that the school's infrastructure and environment are important factors in enhancing learning and contribute to the quality of education provided by the school. Location of the school, building, laboratory, library, teaching learning materials, play ground, play materials all contributed to the quality of the school.

The data presented in Table 21 revealed that 94.59% of government higher secondary principals were found dissatisfied with the infrastructural facilities available in their schools. Majority of aided school principals (85.71) were satisfied with infrastructural facilities and all the unaided principals were fully satisfied with the facilities.

Scarcities noticed by the higher secondary principals.

This item was intended to find out the infrastructural scarcities in higher secondary schools. As the question was free response item, the researcher had enumerated the responses given by the higher secondary principals in their own words before tabulating, analysing and interpreting them.

After going through the infrastructural scarcities noticed by principals, it is clear that there are repetitions. This repetition of response is due to open ended nature of question. Hence the researcher after putting the similar responses under one head and rearranged responses in the following Table 22.

Table 22

Infrastructural Scarcities Noticed by Principals

Sl. No.	Scarcities	Responses		
		Govt. Principals	Aided Principals	No of Responses
1	Class room	16		16
2	Laboratory facilities	14		14
3	Library and reading rooms	11		11
4	Building, furniture	11		11
5	Smart room	6	2	8
6	Toilet	6		6
7	Cleaning facilities	6		6
8	Bench, Desks	5		5
9	Auditorium	3	1	4
10	Office room	4		4
11	Water	3		3
12	Play ground	3		3
13	Sick room	1	1	2
14	School bus	1	1	2
15	Girls room/Refreshment room	1		1
16	Staff room	1		1
17	Black board	1		1

Since the principals were free to give more than one alternative the total comes to more than 38 under each category. It is clear from the table that in most of the Government higher secondary schools the main infrastructural scarcity is the inadequacy of class room and laboratory facilities. The second main scarcity noticed by the principals, is library and building facility. The other scarcities include toilet, smart room, bench, desks, auditorium etc.

Administration and Constraints in Teaching

This item deals with practical difficulties to attend office work along with teaching, and availability of human resources. Collected responses has been tabulated in Table 23.

Table 23

Administration and Constraints in Teaching

Sl. No.	Items	Type of Management	Total responses	
			Yes	No
1	Face Practical Difficulties Due to Teaching and Administration Simultaneously	Govt.	35 (94.59)	2
		Aided	20 (95.24)	1
		Unaided	3 (50)	6
		Total	58 (86.57)	9
2	Lack of Teachers for all Subject in Your School	Govt.	24 (64.86)	13
		Aided	2 (9.52)	19
		Unaided	0	9
		Total	26 (38.81)	41

The data presented in Table 23 reveal that 94.59% of government school principals and 95.24% of aided school principals opined that they were facing various difficulties in taking up the duty of teaching and administration of school activities simultaneously. In unaided schools 50% principals agreed that they faced constraints due to teaching and administration at a time. Among government higher secondary principals (65%) and aided higher

secondary school principals (10%) faced difficulties due to lack of teachers for handling all the subjects.

Single Window Admission Process

This item deals with the admission procedure of higher secondary students in Kerala. The Single Window System (Ekajalakam) has succeeded in rendering Kerala higher secondary plus one admission process in simple and transparent manner by ensuring social justice for the last eight years. Government has successfully introduced web based online admission process from the year 2009-10.

Table 24

Constraints in First Year Admission Process

Sl. No.	Items	Type of Management	Total Responses	
			Yes	No
1	First year admission procedure is a tedious task	Govt.	27 (72.97)	10
		Aided	12 (57.14)	9
		Total	39 (58.21)	19

From the **Table 24** it is evident that 72.97% of government higher secondary principals and 57.14% aided principals agreed that first year admission procedure was a tedious task to them.

Problems in single window admission

The major problems in single window admission process perceived by higher secondary principals is given in Table 25

Table 25

Problems in Single Window Admission Process

Sl. No.	Problems in Single Window	Govt.	Aided	Total Response
1	Lengthy admission process	17	7	24
2	Many transfers and allotment	4	1	5
3	Difficult to upload details in time (links are not available in time)	4		4
4	Duty assigned in vacation (Non availability of staff during vacation)	2	1	3
5	Teaching principal-busy schedule (time consuming)	1	2	3
6	Admission, plus one, plus two valuation SAY exam, etc. at the same time		3	3
7	Non-cooperation of IT @ school officials	2	1	3
8	Power supply interruption affect the process	2		2
9	Lack of sufficient batches especially commerce and humanities	1		1
10	Teachers are in vacation/ valuation	1		1
11	No data entry operators	1		1
12	Lagging due to lack of awareness	1		1
13	Repeated supplementary allotment creates problems	1		1
14	Lack of supporting staff-teachers having periods have to do the admission work also	1		1
15	Difficulty to keep all students details and register	1		1
16	Parents' lack awareness about single window		1	1

From the Table 25, it is evident that 39 principals (Total) pointed out that single window admission was a tedious task to them. Out of 39 principals 24 agreed that continuous and prolonged admission process affected both the academic and administrative aspects of higher secondary schools.

Parent Teacher Association (PTA)

This item in the schedule deals with whether there are any constraints in the functioning of PTA, sufficient time to conduct general body and executive meeting, and opinion regarding working of PTA.

Table 26

Parent Teacher Association

Sl. No.	Items	Type of Management	Total responses	
			Yes	No
1	Feel any Difficulty in Functioning of the PTA	Govt.	7 (18.9)	30
		Aided	1 (4.7)	20
		Unaided	1 (11.11)	8
		Total	9 (13.43)	58 (86.57)
2	Enough Time to Arrange General Body	Govt.	22 (59.46)	15
		Aided	16 (76.19)	5
		Unaided	8 (88.88)	1
		Total	46 (68.66)	21
3	Enough Time to Arrange Executive	Govt.	26 (70.27)	11
		Aided	15 (71.43)	6
		Unaided	9 (100)	0
		Total	50 (74.63)	17

Sl. No.	Items	Type of Management	Total responses	
			Yes	No
4	Satisfied with Working of PTA	Govt.	32 (86.49)	5
		Aided	19 (90.48)	2
		Unaided	7 (77.77)	2
		Total	58 (86.57)	9
5	Difficulty in Implementing Decisions of PTA	Govt.	4 (10.81)	33 (89.19)
		Aided	0	21 (100)
		Unaided	0	9 (100)
		Total	4 (5.97)	63 (94.02)

From the table 26 it is clear that out of 67 principals 58 (86.57%) are of the opinion that they don't feel any kinds of difficulty in the functioning of PTA in their schools. 68.66% principals are of the opinion that they have enough time to arrange PTA general body meeting and 74.63% opined that they had enough time to arrange PTA executive meetings.

From the above Table it is evident that 86.57% principals are satisfied with the working of PTA in their schools and only 5.97 are of the opinion that they have difficulties in implementing the decisions suggested by PTA.

Functioning of PTA

Of the nine (13.43) principals, who agreed dissatisfaction in the working of PTA in higher secondary only 3 responded to reasons for dissatisfaction and their responses are presented in Table 27.

Table 27

Satisfaction in the Functioning of PTA

Sl. No.	Reasons Lack of Satisfaction in the Working of PTA	No of Responses
1	Conflicts between high school and higher secondary for implementing the decisions	1
2	Un necessary intervention of PTA members create problems	2

Table 27 shows that, the reasons for lack of satisfaction in the working of PTA emphasize over the conflict between high school and higher secondary in implementing the decisions as well as the interaction of PTA members.

Cluster Meetings

The data obtained for the effectiveness of cluster meeting have been analysed and presented in Table 28

Table 28

Effectiveness of Cluster Meetings

Sl. No.	Items	Type of Management	Total	
			Yes	No
1	Cluster Meeting for Principals are Effective	Govt.	18 (48.65)	19
		Aided	16 (76.19)	5
		Unaided	5 (55.56)	4
		Total	39 (58.21)	28

From the Table 28 it is inferred that 58.21% principals agreed that cluster meetings for principals were effective.

Management of Open School Students

This item in the schedule deals with difficulties in the management of open school students and the major constraints in managing them.

Table 29

Management of Open School Students

Sl. No.	Item	Type of Management	Total	
			Yes	No
1	Face Constraints in Managing Open Students	Govt.	17 (45.95)	20
		Aided	6 (28.57)	15
		Total	23 (39.66)	35 (60.34)

From Table 29 it is clear that 39.67% principals are of the opinion that they face difficulties in managing open school students allotted to their schools. After going through the constraints enumerated the responses are compiled in the following Table 30

Table 30

Constraints in the Management of Open Schools Students

Sl. No	Constraints	Govt. Principals	Aided Principals	No. of Responses
1	Lack of classrooms	6	1	7
2	Excess students admitted to open stream	2	3	5
3	CE work assessment is not scientific	3		3
4	Shortage of invigilators	1	1	2
5	Lack of direct contact with students	2		2

Sl. No	Constraints	Govt. Principals	Aided Principals	No. of Responses
6	Lack of supporting staff creates problems for the proper organization of activities	1	1	2
7	Lack of space and infrastructure to accommodate students	2		2
8	Management of open system is not systematic	1		1
9	Lack of time to manage large number of students			1
10	Lack of seriousness in attending classes and submission of work			1
11	No humanities batch in our school but allotted the humanities students too		1	1

After going through various constraints in managing open students, it is noted that some of the constraints can be combined together as they mean or point out the same sense. From the table it is clear that open school students' management is tedious task to principals due to lack of infrastructure, inadequate human resource and proper planning by the authorities.

Fund and Office Management

Data obtained about the fund and office management in the higher secondary schools had been analysed. The data obtained were consolidated and presented in Table 31.

Table 31

Financial Aids from Government Authority and Office Management (N=58)

Sl. No.	Items	Type of Institution	Total	
			Yes	No
1	Obtained financial assistance from authority	Govt.	31 (83.78)	6
		Aided	5 (23.80)	16
		Unaided		
		Total	36 (62.07)	22
2	Faced difficulties in processing various bills	Govt.	18 (48.64)	19
		Aided	5 (23.80)	16
		Unaided		
		Total	23 (39.66)	35
3	Faced constraints in making Correspondence with various offices (N=67)	Govt.	17 (45.95)	20
		Aided	10 (47.62)	11
		Unaided	1 (11.11)	8
		Total	28 (41.79)	39

Table 31 shows that, out of total respondents 62.07% agreed that their institution got financial assistance from Government. It was also found that 39.66% principals faced various difficulties in preparing and submitting bills to treasury and 41.79% argued that they faced constraints in making correspondence with various offices.

Difficulties in Correspondence with Various Offices

The following Table gives the details of difficulties in making correspondence with various offices.

Table 32

Difficulties in Correspondence with Various Offices

Sl. No.	Difficulties in Correspondence with Various Offices	Govt.	Aided	Unaided	Total Responses
1	Lack of time due to work load	8	3	1	12
2	Without supporting staff it is difficult to arrange office works in proper time	5	6		11
3	Nobody is there to sent letters	1			1
4	Lack of facilities	1			1
5	Due to lack of supporting staff so much time is needed for such works which causes missing classes forcefully	1			1
6	It is difficult to Prepare and communicate various letters	1			1
7	Difficult to communicate with RDD Office and ICT cell.		1		1

The data in Table 32 reveals that lack of adequate time is the major difficulty faced by higher secondary principal in making correspondence with various offices. It is very difficult to make proper communication with offices in time without adequate number of office staff.

Constraints in accessing circulars and orders from directorate

Item no 15 deals with constraints felt by the principals in accessing circulars/ orders from directorate in time. The constraints felt by higher secondary principals are given in Table 33.

Table 33

Constraints in Accessing Circulars and Orders

Sl. No	Nature of Difficulty	Govt. Male	Aided Male	Unaided	Total F
1	Lack of time	3		1	4
2	Circulars and orders provided in portal only the last leg of time	1	2		3
3	Many circulars put at a time		3		3
4	network problems	2		1	3
5	Lack of ministerial staff it is difficult to done in time	1	1		2
6	implementation of circular is difficult		1		1
7	Short notice may be brought obstacle		1		1

Table 33 reveals that the major constraints in accessing circulars and orders put in the portal only the last leg of time, at a time more circulars are put in the portal, lack of adequate time, and net work complaints.

Administration of Day to Day Activities

At present, the higher secondary schools in Kerala are managed by heads of institutions (Principal) on a day-to-day basis, as per the guidelines laid down by the Directorate of higher secondary education. The heads of institutions are responsible for withdrawal and payment of salaries, sanction of leave of staff, disciplining of the students, academic supervision of teachers, conduct of examinations etc.

Under this category, monitoring and supervision of the school activities, difficulty in monitoring and supervision of the teaching learning

activities and constraints in checking cleanliness of school by the school Principals in the school have been studied.

Table 34

Administration of Daily Activities of Higher Secondary Schools

Sl. No.	Items	Type of Management	Total	
			Yes	No
1	Enough time to supervise club activities	Govt.	12 (32.43)	25
		Aided	6 (28.57)	15
		Unaided	6 (66.67)	3
		Total	24 (35.82)	43
2	Any difficulties in solving day-to-day problems	Govt.	16 (43.24)	21
		Aided	7 (33.33)	14
		Unaided	2 (22.22)	7
		Total	25 (37.31)	42
3	Have enough time to check cleanliness of school surroundings	Govt.	14 (37.83)	23
		Aided	5 (23.81)	16
		Unaided	4 (44.44)	5
		Total	23 (34.33)	44 (65.67)

Table 34 shows that 35.82% principals agreed that they have enough time to supervise club activities in their schools and 37.31% argued that they feel difficulties in solving day today problems of schools. Only 34.33% have time to check cleanliness of school surroundings.

Training-Administrative Training Needs of Higher Secondary Principals

The obtained data regarding administrative training needs have been analysed. The result of the analysis is presented in Table 35.

Table 35

Administrative Training to HSS Principals

Sl. No	Administrative Training	Type of Management	Total responses	
			Yes	No
1	Attended any training programmes to improve administration capacity	Govt.	27 (72.97)	10
		Aided	14 (66.67)	7
		Unaided	7 (77.78)	2
		Total	48 (71.64)	19 (28.36)
2	Needs training to improve administration capacity	Govt.	36 (97.29)	1
		Aided	21 (100)	0
		Unaided	9 (100)	
		Total	66 (98.51)	1

Table 35 shows that 71.64% principals attended training programmes for improving administration capacities and majority of principals (98.51%) favoured that they needed training for improving administration capacities.

Change in Working Days and Time

As per Government Order GO(MS) No.189/2014 Gen Edn dtd 16.09.2014 Kerala state education department introduced a system of five day working week for higher secondary students from the academic year

2014. This proposal was put forward by Labba commission report. Earlier time schedule was 9.30 AM to 4.15 PM it was changed to 9AM to 4.45 PM. The obtained data regarding the effectiveness of new time schedule have been analysed and the result is presented in Table 36.

Table 36

Effectiveness of New Time Schedule

Sl. No.	Item	Type of Management	Total Responses	
			Yes	No
1	New time schedule better than earlier time schedule	Govt.	24 (64.86)	13
		Aided	4 (19.05)	17 (80.95)
		Unaided	3 (33.33)	6
		Total	31 (46.27)	36 (53.73)

Of the total 67 principals only 46.27% agreed that the new time schedule was effective. In the case of aided principals majority of them (80.95) opined that new schedule was not so good. 66.67% of unaided principals opined that new schedule was not so good.

Table 37

Problems in New Time Schedule to HSS Principal

Sl. No.	Problems in New Time Schedule	Type of Management	Total Responses
			Yes
1	Tight schedule- Students not get leisure time when they reach school at 8.45 AM leave at 4.45 PM and lack of interval time	Govt.	5
		Aided	8
		Unaided	3
		Total	16

Sl. No.	Problems in New Time Schedule	Type of Management	Total Responses
			Yes
2	The head of the institution had to work from 8.30 AM to 5.30 PM including Saturdays	Govt.	2
		Aided	3
		Unaided	1
		Total	5
3	Continuous learning activities make the child irritating	Govt.	4
		Aided	5
		Unaided	3
		Total	12
4	New schedule benefited only to teachers and tuition centers	Govt.	1
		Aided	1
		Unaided	1
		Total	3
5	Strain for teachers	Govt.	1
		Aided	1
		Unaided	-
		Total	2
6	Students are unable to get concentration in the last periods	Govt.	1
		Aided	2
		Unaided	2
		Total	5
7	It is against human right of principals. Since they have to work from 8.30 AM to 5.30 PM and then in Saturdays. But working time of office staff is only 10 AM to 5 PM. It is highly inconvenient	Govt.	1
		Aided	3
		Unaided	-
		Total	4
8	Serious problems are faced by parents. Due to inadequate transport facilities students reached home very late so parents are anxious.	Govt.	2
		Aided	2
		Unaided	-
		Total	4

Table 37 reveals the major problems in the new time schedule are lack of interval time, long working time, students strain due to packed time table, lack of concentration, and parents anxiety.

Opinion of Principals on Higher Secondary Education System in Kerala and their Suggestions for Improvement

The obtained data regarding the opinion of higher secondary principals of the sampled higher secondary schools have been analysed. As the item was open the researcher enumerated the responses given by the higher secondary principals in their own words before analyzing and interpreting. After going through the suggestions enumerated and the major suggestions are the following.

Suggestions of HSS principals.

To strengthen the HSS education the following suggestions are made by HSS principals:-

Suggestions regarding over work load.

- Principal post should be converted as non teaching or reduce teaching load of principals, and appoint adequate non teaching staff.

Suggestions regarding evaluation.

- Abolish SAY and improvement examinations and its valuation camp.
Stop double valuation for science subjects

Suggestions regarding administration.

Reduce teacher-pupil ratio, Ensure teacher pupil direct contact, Provide moral class & allot one period for the same, Appoint efficient permanent teachers, Limit the duration of the admission process, Set district

offices for HSS, Provide physical training to HSST, All transfers should be completed before the beginning of the academic year, Distribute fund in time, Don't allow working days for other activities/meetings, Reduce work load by reducing subjects as three (as in Pre-degree course) instead of four. Supply registers, forms and stationary items to school, Appoint efficient lab assistants, Dress code to teachers, need proper planning of activities. Government should take initiatives to improve HSS education, avoid irresponsibility of directorate and officers and need sincere officials in higher posts, Provide adequate government aid to school, Quality improvement is needed, Take speedy actions to give approval of appointment, seniority etc, Coordinate activities in unaided sector. Need more involvement of authorities in curricular and administrative matters, Avoid political domination, Need more transparency clear guidelines and effective vision, Avoid single window system and permit students to apply for admission in any school,

Suggestions regarding working time change in HSS.

- Saturday holiday to principal, Re arrange time schedule, Set teaching time 9AM to 3 PM, and utilise 3PM to 4.30 for co curricular activities,

Suggestions regarding facilities.

- Provide adequate facilities, Provide separate computer for HSS, Appoint physical education teachers, Provide all services like counseling, health checkup etc to students

Suggestions regarding curriculum.

- Syllabus & curriculum must suit the needs of academic community/ need modification, Include more time for extracurricular activities, Syllabus of all subjects should match with that of CBSE.

Suggestions regarding professional empowerment.

- Provide orientation/refresher classes to teachers to make them able to handle advanced courses, Equip principal/ one or two senior teachers with administration and official work, Prefer one day management training course for total staff of one school/each school in the presence of authority, Provide e mat training to principals as soon as possible

Discussion of Results

The analysis of data obtained through interview on the 11 dimensions taken for the study reveals the following.

Location and facilities of higher secondary schools.

1. With regard to accessibility of school location 83.78% of Government higher secondary principals, 90.48% of aided principals and all of unaided principals argued that they were satisfied.
2. Compared to aided and unaided schools majority of government higher secondary principals (95%) were found dissatisfied with infrastructural facilities available in their schools. As regards facilities 55.17%, 48.28%, 37.93%, 37.93% principals demanded that class room facilities, lab facilities, library facilities, and building and furniture respectively should be improved.

Administration and constraints in teaching.

Result of the study reveals that Principals (87%) are facing various difficulties in taking up the duty of teaching and administration of school activities simultaneously.

Single window admission process.

Out of 58 principals 39 are of the opinion that students admission process (single window) is a tedious task to them. Majority of them are of the opinion that prolonged admission process adversely affects academic and administrative performance of higher secondary education in Kerala.

PTA.

Out of 67 principals 9 expressed their opinion that they feel difficulty in the functioning of PTA. 5.97% of higher secondary principal agreed that they feel difficulties in implementing the decisions suggested by PTA.

Cluster meeting.

Regarding effectiveness of cluster meeting majority (58.21%) principals opined that principals cluster meetings are effective.

Management of open school students.

Difficulties in the management of open students are one of the major constraints faced by 40% higher secondary principals.

Constraints in managing open students include problems related to accommodation of large number of open students, Lack of adequate facilities, large number of students, continuous evaluation of open students, and lack of adequate human resource are the major hurdles reported by the heads in the proper management of open students.

Fund and office management.

Difficulties in processing various bills faced by 48.65% government principals and 23.81% aided principals and 45.95% government principals, 47.62% aided principals' states that they face various constraints in making

correspondence with various offices. Most of the principals opined that the major problem they faced in accessing order/circulars is that the directorate put the order/circular in the last leg of time without adequate staff they can't able to visit the portal throughout the day.

Administration of day today activities.

The result of the study reveals that Principals (36%) have enough time to supervise club activities in their schools and 37.31% argued that they feel difficulties in solving day today problems of schools. Only 34.33% have time to check cleanliness of school surroundings.

Need for administrative training.

Most of the higher secondary principals (71.64) attend various training programmes to improve administration capacity. Regarding to the administrative training 66 out of 67 principals states that effective training programmes should be organized for higher secondary principal every year.

Reform in the time schedule.

The obtained data regarding the effectiveness of new time schedule reveals that 64.86% government principals opined that the new schedule was good, but 80.95% aided principals opined that there are some problems in new schedule.

Opinion of principals on higher secondary education system in Kerala and their suggestions for improvement.

The analysis made on the opinion of principals regarding higher secondary education system revealed that most of them emphasised the need for supporting staff. Most of the government and aided principals suggested that as the head of the institution principal should be exempted from teaching.

Interpretation

The result based on the interview schedule to higher secondary principals revealed that higher secondary education was functioning effectively in Kerala but it has some constraints. Government and aided Principals suggested that appointment of supporting staff was necessary for the smooth functioning of office.

Researcher when approached the principals all of them were busy with administrative matters. They hold triple role- Institution head, teacher/& (lab work- science subjects), and office administrator.

Response of Principals of Vocational Higher Secondary Schools in Kerala

Analysis of Data of Interview with Principals of Vocational Higher Secondary Education

This section deals with the analysis of data collected from principals of vocational higher secondary schools in Kerala. The data collected from 16 vocational higher secondary principals have been analysed on the basis of response made by them. The analysis of the data and suggestions made by them on each dimension are as follows.

Location and facilities of vocational higher secondary schools.

Data regarding accessibility of school location, infrastructure facilities and scarcities were collected and analysed. Out of 16 principals 14 have responded that their school location was easily accessible.

Out of 16 principals 12 have opined that infrastructural facilities in schools are insufficient. 75% of principals were dissatisfied with the infrastructural facilities. Only four vocational higher secondary principals have stated that the infrastructural facilities in the vocational higher secondary are sufficient.

Scarcities in facilities noticed by the vocational higher secondary principals.

This item was intended to find out the infrastructural scarcities in vocational higher secondary schools. As the question was open the researcher had enumerated the responses given by the higher secondary principals in their own words before tabulating, analysing and interpreting them.

After going through the infrastructural scarcities noticed by principals, it is clear that there are repetitions. This repetition of response is due to open ended nature of question. Hence the researcher after putting the similar responses under one head and rearranges responses in the following Table 38

Table 38

Infrastructural Scarcities Noticed by Vocational Higher Secondary Principals (N=12)

Sl. No.	Scarcities	Total Yes Response
1	Laboratory	9
2	Class Room	6
3	Library	4
4	Smart room	4
5	Furniture	3
6	Urinals& toilets	2
7	Building	1
8	Laboratory equipments	1
9	Space for work experience	1
10	Office room	1
11	Rest room	1

The analysis of the data obtained through interview reveals the following. Regarding infrastructural scarcities 9 principals out of 12 are of the opinion that vocational higher secondary schools are not having adequate laboratory facilities. The main scarcity noticed by the principals is lack of lab facilities in vocational schools. The second main scarcity noticed by the principals is class room. The other scarcities include library, smart room, furniture, toilets etc.

Administration and Constraints in Teaching

This item deals with practical difficulties to attend office work along with teaching, and availability of adequate human resources.

Table 39

Administration and Constraints in Teaching to VHS Principal

Sl. No.	Items	Type of Management	Total	
			Yes	No
1	Faced practical difficulties due to teaching and administration simultaneously	Govt.	10 (76.92)	3
		Aided		3
		Total	10 (62.5)	6
2	Lack of teachers for all subject in your school	Govt.	10 (76.92)	3
		Aided		3
		Total	10 (62.5)	6

The data presented in Table 39 reveal that 75% of government male principals and 77.78% of female principals favoured that they faced various difficulties due to teaching and administration of school activities at a time. 77% (10) government higher secondary principals faced difficulties due to lack of teachers for handling all the subjects.

Single Window Admission Process

This item deals with the admission procedure of vocational higher secondary students in Kerala. The Single Window System (Ekajalakam) has succeeded in rendering Kerala higher secondary plus one admission process simple and transparent and in ensuring social justice in it for the last eight years. i.e., Government has successfully introduced web based online admission process from the year 2009-10. Data regarding constraints in admission process were collected, analysed and presented in Table 40.

Table 40

Constraints in Admission Process VHSS Principal

Sl. No.	Items	Type of Management	Total response	
			Yes	No
		Govt.	6	7
1.	Plus one admission procedure is a tedious task	Aided	1	2
		Total	7 (43.75)	9 (56.25)

From Table 40 it is evident that 43.75% of vocational principals agreed that plus one admission procedure was a tedious task to them.

Problems in single window admission.

The major problems in single window admission process perceived by vocational higher secondary principals are given below:-

1. With regard to data entry and of course the admission process takes long time in VHSE department.
2. VHSE students admission and transfer makes admission a tedious task

3. Allotment and admission process should be completed as early as possible. Now it is a long term process.
4. Single window is a very good process but difficulties arise when there are so many allotment transfer etc
5. The allotment and transfer should be minimized. The admission process should be completed before June and classes should be started in June 15th itself.

Parent Teacher Association (PTA) in VHSS

This item in the schedule deals with whether there are any constraints in the functioning of PTA, time sufficiency to conduct general body and executive meeting, and opinion regarding working of PTA.

Table 41

Parent Teacher Association in VHSS

Sl. No.	Items	Type of Management	Total responses	
			Yes	No
1	Feel Any Difficulty in Functioning of the PTA	Govt.	1 (7.69)	12
		Aided	0	3
		Total	1 (6.25)	15 (93.75)
2	Satisfied with Working of PTA	Govt.	12 (92.31)	1
		Aided	0	3
		Total	12 (75)	4 (25)
3	Difficulty in Implementing Decisions Suggested by PTA	Govt.	1 (7.69)	12
		Aided	1 (33.33)	2
		Total	2 (12.5)	14 (87.5)

From Table 41 it is clear that out of 16 principals 15 (93.75%) are of the opinion that they don't feel any kinds of difficulty in the functioning of PTA in their schools. From the above Table it is concluded that 75% principals are satisfied with the working of PTA in their schools and only 12.5% are of the opinion that they have difficulties in implementing the decisions suggested by PTA.

Cluster Meetings

The data obtained for the effectiveness of cluster meeting have been analysed and presented in Table 42.

Table 42

Effectiveness of Cluster Meetings to VHSS Principals

Sl. No.	Items	Type of Management	Total Responses	
			Yes	No
1	Cluster meeting for principals are effective	Govt.	8 (61.54)	5
		Aided	3 (100)	0
		Total	11 (68.75)	5

From Table 42 it is inferred that 68.75% principals opined that principals cluster meetings were effective.

Fund and Office Management

Data obtained for the fund and office management in the higher secondary schools have been analysed. The data obtained have been consolidated and is presented in Table 43.

Table 43

Financial Aids from Authority and Office Management in VHSS

Sl. No.	Items	Type of Management	Total Responses	
			Yes	No
1	Obtained financial assistance from authority	Govt.	10(62.5)	3
		Aided		3
		Total	10(62.5)	6(37.5)
2	Faced difficulties in processing various bills	Govt.	1	12
		Aided		3
		Total	1(6.25)	15(93.75)
3	Faced constraints in making Correspondence with various offices	Govt.	2	11
		Aided	2	1
		Total	4 (25)	12(75)

Table 43 shows of total respondents 62.5% agreed that their institution got financial assistance from Government. It is also found that 6.25% principals faced various difficulties in preparing and submitting bills to treasury and 25% opined that they faced constraints in making correspondence with various offices.

Management of Day Today Activities

At present, the vocational higher secondary schools in Kerala are managed by heads of institutions (Principal) on a day-to-day basis, as per the guidelines laid down by the Directorate of vocational higher secondary education. The head of institutions are responsible to draw and payment of salaries, sanction of leave of staff, disciplining of the students, academic supervision of teachers, conduct of examinations etc.

Under this data regarding constraints in management of day today activities were collected.

Table 44

Management of Daily School Activities in VHSS

Sl. No.	Items	Type of Management	Total Responses	
			Yes	No
1	Enough time to supervise club activities	Govt.	7 (53.85)	6
		Aided	2 (66.67)	1
		Total	9 (56.25)	7
2	Any difficulty in solving day-to-day problems	Govt.	3 (23.08)	10
		Aided	0	3
		Total	3 (18.75)	13
3	Have enough time to check cleanliness of school surroundings	Govt.	10 (76.92)	3
		Aided	3 (100)	0
		Total	13 (81.25)	3

Table 44 shows that 56.25% principals agreed that they had enough time to supervise club activities in their schools and 18.75% argued that they felt difficulties in solving day today problems of schools. 81.25% have time to check cleanliness of school surroundings.

Training - Administrative Training Needs

The obtained data regarding administrative training needs have been analysed. The result of the analysis is presented in Table 45.

Table 45

Administrative Training to VHSS Principals

Sl. No.	Items	Type of Management	Total	
			Yes	No
1	Attended any training programmes to improve administration capacity	Govt.	9	4
		Aided	1	1
		Total	11 (68.75)	5 (31.25)
2	Needed training to improve administration capacity	Govt.	13	
		Aided	3	
		Total	16 (100)	

Table 45 shows that 68.75% principals attended training programmes for improving administration capacities and all respondents demanded training for improving administration capacities.

Opinion on Vocational Higher Secondary Education System in Kerala and Suggestion for Improvement

The obtained data regarding the opinion of higher secondary principals of the sampled vocational higher secondary schools had been analysed. As the item was open the researcher enumerated the responses given by the vocational higher secondary principals in their own words before analyzing and interpreting. The responses pooled out from vocational higher secondary principals and the following results were obtained:-

To strengthen the VHS education the following suggestions are made by VHSS principals:-

- Have to combine or merge the HSS and VHSS sections to empower the HSS stream in Kerala state.
- Avoid insufficient uniformity in different posts
- Introduce advanced courses and eliminate outdated courses from curriculum
- When the post of clerk become vacant it is very difficult to work as institution head, office head, and teacher simultaneously.
- Twenty four teaching hours and duties of principal is really hard
- Due to lack of office staff forced to miss so many classes.

Discussion

Analysis made on the opinion of higher secondary principals regarding higher secondary education system in Kerala reveals that most of them irrespective of category emphasised the need to combine or merge the higher secondary and vocational higher secondary. Most of the principal opined the work load of principal was heavy and they face stress in office management due to lack of supporting staff.

The analysis of data obtained through interview on the 9 dimensions taken for the study reveals the following.

Location and facilities of higher secondary schools.

Regarding facilities 12 out of 16 vocational higher secondary principals are of the opinion that their schools have inadequate infrastructure. Aided principals were fully satisfied with the facilities. Regarding facilities principals demanded that class room facilities, lab facilities, library facilities, smart room furniture etc should be improved.

Administration and constraints in teaching.

Regarding the teaching 10 out of 13 government vocational higher secondary principals agreed that they faced constraints due to teaching and administration at a time. Majority of government vocational principals opined that their institution suffered due to lack of adequate teachers for subjects.

Single window admission process.

Single window admission process is a tedious task to 7 out of 16 principals. Majority of them are of the opinion that continuous and never ending admission process adversely affects academic and administrative performance of higher secondary education in Kerala.

PTA.

12 out of 16 expressed their opinion that they were satisfied with the functioning of PTA.

Cluster meeting.

Regarding effectiveness of cluster meeting majority (68.75%) principals opined that principals cluster meetings were effective.

Fund and office management.

As regards office management 1 out of 16 principals, opined that they faced difficulties in processing various bills and 4 out of 16 states that they face various constraints in making correspondence with various offices.

Management of day today activities.

Principals agreed that they had enough time to supervise club activities in their schools (56.25) and 18.75% argued that they felt difficulties in solving day today problems of schools. 81.25% have time to check cleanliness of school surroundings

Training - Administrative training needs.

Most of the higher secondary principals (68.75) attended various training programmes to improve administration capacity. Regarding need for administrative training, 100% percentage principals agreed that they needed training to improve administrative capacity.

The analysis made on the opinion of principals regarding vocational higher secondary education system revealed that most of them emphasised the need for merging higher secondary and vocational higher secondary. Most of the government and aided principals suggested that the head of the institution, principal, should be exempted from teaching.

Opinion of principals on vocational higher secondary education system in Kerala and their suggestions for improvement.

The result based on the interview schedule to vocational higher secondary principals revealed that vocational higher secondary education was functioning effectively in Kerala but it has some constraints. Majority of the principals are dissatisfied with the discrimination between higher secondary and vocational higher secondary with regard to differences in the scale of pay, promotion, working time etc. They suggested merging of higher secondary and vocational higher secondary was the need of hour. They highlighted an urgent need for curriculum revision.

Part B

Response of Teachers of Higher Secondary Schools in Kerala

In order to accomplish the objective no 2 of this study the response of the higher secondary teachers were collected and analysed. The data collected through Questionnaire meant for higher secondary teachers were analysed and interpreted in Part B of this chapter. The analysis of the data and suggestions made by them on each dimension are as follows.

Library Facilities in Higher Secondary Schools

Table 46

Library Facilities in Higher Secondary Schools

Sl. No.	Items	Yes
1	Dictionaries and other reference materials available to the students	111 (76.55)
2	Encourage reading habit of students	141 (97.24)
3	Any problems in utilizing library facilities by students	62 (42.76)

Table 46 shows 76.55% of higher secondary teachers' opined dictionaries and other reference books were available to students in library. According to Table, 97.24% teachers agreed that they encouraged reading habit among students.

Table also indicates that 42.76% teachers state that there were problems in the proper utilization of library facilities in higher secondary schools.

Table 47

Problems in Utilization of Library Facilities (N=62)

Sl. No.	Problems in Utilization of Library Facilities	No of Responses
1	Lack of facilities such as reading room and library functioned with one shelf for keeping books	40 (64.52)
2	students get less time for library because of the routine work load for doing assignment projects etc	17 (42.5)
3	Lack of service of the librarian	17 (42.5)
4	Lack of adequate books	15 (24.19)
4	Single library for UP, higher secondary and high school	2 (3.23)
5	Students lack of interest to utilise library facility	2 (3.23)
6	Teacher in charge are not available when the students are free	1 (1.61)
7	over strength of students	1 (1.61)

Data in Table 47 reveals that higher secondary teachers perceive that problems in the utilization of library facilities is due to lack of well set up libraries, lack of proper time for the utilization of facility, lack of facilities like librarian, reading facilities, books, lack of students interest, unavailability of teacher in charge, and high students ratio in HSS.

Of the teachers 64.52% state that the problem in the utilisation of library was because of no proper set up of library in the higher secondary section and they also state that libraries were functioned in the school only for name sake and one shelf is used for keeping some books and 42.5% of teachers stated that the problem was because of lack of adequate time to

utilise library and 42.5% teachers stated that the problem was because of lack of librarian, reading rooms and facilities. Another 24.19% teachers stated that lack of adequate books were still a major problem to utilise library properly. 3.23% stated that the problem was because of single library for higher secondary, high school and UP section. The other problems in the utilisation of library facilities perceived by higher secondary teachers include lack of students' interest, unavailability of teacher in charge (library) in time, and high students' ratio.

Curriculum

Data obtained regarding higher secondary curriculum from higher secondary teachers (145) have been analysed. The analysis revealed the following result:

Table 48

Higher Secondary Curriculum

Sl. No.	Items	Yes
1	The existing syllabus is adequate	97 (66.89)
2	The student centered teaching was effective for your subject	104 (71.72)
3	Do you have adequate time for preparation	117 (80.69)
4	students reached higher secondary class after attaining minimum level of learning	49 (33.79)
5	Find time to provide remedial lessons	75 (51.72)

Of the total teachers 66.89% higher secondary teachers felt that the existing higher secondary syllabus was adequate. 71.72% higher secondary teachers

opined that the student centered teaching was effective for their subject. 80.69% agreed that they had adequate time for preparation. 33.79% agreed that students reached higher secondary school after attaining minimum level of learning. 51.72% teachers provided remedial lessons for those who lack pre requisite knowledge.

In order to improve the syllabus of higher secondary education the following suggestions were made:

Table 49

Suggestion Regarding Further Improvement of Syllabus in HSS (N=48)

Sl. No.	Suggestion Regarding Further Improvement of Syllabus	No of Responses
1	Include latest information in the existing syllabus	13 (27.08)
2	Reduce irrelevant contents	12 (25)
3	Consider the time factor in setting syllabus	9 (18.75)
4	Sequential order of syllabus is needed	4 (8.33)
5	Rearrange syllabus according to time and age	4 (8.33)
6	Ensure all relevant topics included in the syllabus	3 (6.25)
7	All subjects should be life oriented	3 (6.25)
8	Over load to students	3 (6.25)
9	Include topics like nationalism, integration	1 (2.08)
10	Provide supplementary materials	1 (2.08)

For the improvement of syllabi, 27.08% argued that include latest information in the syllabus, 25% of higher secondary teachers stated that reduce the irrelevant contents, 18.75% suggested rearrange and order the contents according to time and need sequential order and consider the learners age (8.33).

Teachers have cited various constraints for student centered curriculum transactions. The following constraints have been cited:

Table 50

Constraints Faced by Higher Secondary Teachers in Student Centered Curriculum Transaction (N=145)

Sl. No.	Constraints faced by teachers in student centered curriculum transaction	No of Responses
1	Large number of Students in the class	108 (74.48)
2	Lack of adequate time	85 (58.62)
3	bulky syllabus	69 (47.59)
4	Classroom was not well equipped	5 (3.45)

From the Table 50 it was clear that higher secondary teachers are facing constraints in student centered curriculum transactions. According to 108 higher secondary teachers the constraints behind the student centered curriculum transaction is because of large number of students accommodated in one class. i.e., high teacher pupil ratio became a major hindrance in executing student centered curriculum. 59% teachers opined that lack of adequate time for curriculum transaction was the constraint faced by them for student centered curriculum transaction. Sixty nine higher secondary teachers opined that student centered teaching was not possible due to bulky syllabus

at higher secondary. According to 3.45% lack of well equipped class room also hinder the student centered teaching at higher secondary.

Data obtained regarding the opinion of teachers on constraints in advance preparation for classes have been analysed. Higher secondary teachers have pointed out the following constraints in advance preparation of class:

Table 51

Constraints Faced by HSS Teachers in Advance Preparation for the Class (N=28)

Sl. No.	Constraints Faced by Teachers in Advance Preparation for the Class	No of Responses
1	Lack of time	11 (39.29)
2	Over load of work due to 4 batches	6 (21.43)
3	Lack of proper method	5 (17.86)
4	New devices were lacking	4 (14.29)
5	Lack of reference room	4 (14.29)
6	Official duties create problems in preparation	3 (10.71)
7	Availability of text book in time	2 (7.14)
8	Bulky syllabus	2 (7.14)
9	Want more freedom for outdoor activities	1 (3.57)
10	Needed ICT training in time	1 (0.69)
11	Lack of knowledge in handling projector	1 (3.57)
12	Family bounding	1 (3.57)

The percentage of opinion regarding Constraints faced by higher secondary teachers in advance preparation for the class is due to lack of time (39.29), over loaded work(21.43), lack of proper method(17.86), lack of modern technologies(14.29), lack of reference room (14.29), office burden (10.71), more contents (7.14), etc.

Text Book in Higher Secondary

The Table shows the details of the analysis of Text books in the higher secondary as reported by higher secondary teachers

Table 52

Text Book in Higher Secondary (N=145)

Sl. No.	Items	Yes
1	Text book is effective in planning class room instruction	97 (66.89)
2	Contents in the text book are appropriate for acquiring the objectives	91 (62.76)
3	Contents in the text book are logically organised	67 (46.21)
4	Hand books were available in your school	35 (24.14)
5	Modern technologies available in your school	94 (64.83)
6	Able to Utilise modern technological aids in the class room	83 (57.24)
9	Whether syllabus is overloaded	92 (63.45)
8	Need restructuring of existing syllabus	113 (77.93)
9	Some topics are irrelevant in the syllabus	75 (51.72)
10	Syllabus is according to ability of students	65 (44.83)

Sl. No.	Items	Yes
11	Adequate time is available for effective curriculum transaction	50 (34.48)
12	Text book is efficient as teaching aid	79 (54.48)
13	Contents in the text book is accurate	58 (40)
14	Structure of the text book is good	53 (36.55)
15	Language used in the text is simple	56 (38.62)
16	Accurate printing of the content in the text book	61 (42.07)
17	Readability of the content is fully sufficient	36 (24.83)
18	Appropriate illustrations in the text book	49 (33.79)

Table 52 shows that in planning class room instruction text books are effective as reported by 66.89% higher secondary teachers. 62.76% argued that contents in the text book were appropriate for attaining the objective. 46.21% higher secondary teachers opined that contents in the text books were logically organized in the order of difficulty. 24.14% agreed that handbooks were available in school. 63.45% argued that syllabus was overloaded. 77.93% suggested the restructuring of existing higher secondary syllabus. Only 44.83% agreed that the syllabus was according to the ability of students.

Availability of modern technologies was reported by 64.83% higher secondary teachers. 57.24% teachers agreed that they utilised modern technologies in the class rooms.

The following suggestions were obtained for the improvement of higher secondary text book:-

1. Revise higher secondary text books in every five year.
2. Needed bilingual text book.
3. Reduce the syllabus.
4. Text book should be in simple language.
5. Give importance to language skills.
6. Text book contents should have application in daily life.

Curriculum Transaction

Availability of adequate time for effective curriculum transaction was reported by 34.48% of higher secondary teachers. With regard to the opinion of higher secondary teachers on reasons for inadequate time for curriculum transaction the following results were obtained.

Higher secondary teachers have suggested the following reasons for inadequate time for curriculum transaction:

Table 53

Reasons for Inadequate Time for Transacting HSS Curriculum (N=50)

Sl. No.	Reasons for Inadequate Time for Transacting Curriculum	No of Responses
1	No enough time to plus one due to delay in admission procedure affects classes	28 (56)
2	Over loaded syllabus	22 (44)
3	It is difficult to complete 22 lessons -science	8 (16)
4	Different type students accommodated in class	5 (10)
5	Use of IT method needed	3 (6)
6	Holidays and programmes in working days affect classes	3 (6)

Sl. No.	Reasons for Inadequate Time for Transacting Curriculum	No of Responses
7	After first term teachers were busy with valuation, programmes etc	3 (6)
8	Period time was not effective	2 (4)
9	Inadequate class room facilities	2 (1.38)
10	Large number of students in a class	1 (2)
11	Include physiology part +1	1 (2)
12	Out dated data were included in the curriculum	1 (2)
13	Poor academic & intellectual capacity of students	1 (2)

Table 53 shows the reasons for inadequate time for curriculum transactions reported by higher secondary teachers. The dominant reason reported is due to lack of enough time to plus one due to delay in admission procedure affects classes

Audio Visual aids in Higher Secondary Schools (AV Aids)

The obtained data regarding audio visual aids in higher secondary schools had been analysed. The results obtained from the analysis are the following.

Table 54

AV Aids in Higher Secondary Schools (N = 145)

Sl. No.	Items	Yes
1	Models	63 (43.45)
2	Recordings	16 (11.03)
3	Film	20 (13.79)
4	Projector	96 (66.21)
5	Computer	104 (71.72)
6	Photograph	4 (2.76)
7	Pictures	4 (2.76)

The higher secondary teachers agreed that the following teaching aids available in higher secondary schools include Computer (71.72), Projector (66.21), Models (43.44), Film (13.79), Recordings (11.03), Photograph and pictures (2.76).

Laboratory Facilities in Higher Secondary Schools

The availability and utilization of laboratory facilities as reported by higher secondary teachers have been analysed separately and presented in Table 55. Details of the analysis of laboratory facilities in the higher secondary schools of Kerala as reported by higher secondary teachers are the following.

Table 55

Laboratory Facilities in Higher Secondary Schools (N=85)

Sl. No.	Items	Yes
1	Feel any difficulties in providing instruction during experiment	33 (38.82)
2	Ensured every student doing experiments/Lab work	74 (87.06)
3	Ensured students get enough practical skill through lab work	69 (81.18)
4	Teachers got adequate time to give individual instruction	55 (64.71)
5	Feel any shortcomings in the lab	35 (41.18)

In providing instructions during the experiment 38.82% higher secondary teachers felt difficulties. 87.06% higher secondary teachers ensured doing of lab work by each student. 81.18% ensured that students got enough practical skill through lab work. 64.71% agreed that they got adequate time to give individual instruction. 41.18 percent teachers state that they felt shortcomings in the lab.

The following shortcomings are reported by higher secondary teachers in the laboratory:

Table 56

Shortcomings in the Laboratory Reported by Higher Secondary Teachers
(N=35)

Sl. No.	Shortcomings in the HSS Laboratory	No of Responses
1	Instruments lacking, not updated	12 (34.29)
2	Lack of space(class room used for lab)	10 (28.57)
3	Difficulty in using spirit	5 (14.29)
4	No separate laboratory for each subjects	5 (14.29)
5	Teacher student ratio 1:25	3 (8.57)
6	Chemicals and equipments are lacking	2 (5.71)
7	Practical syllabus should be improved	1 (2.86)

The shortcomings that affect the working of higher secondary laboratory are lack of instruments, lack of separate laboratories, high teacher pupil ratio, lack of chemicals, and lack of practical syllabus.

Attendance

The data obtained for the keeping of attendance register and irregularity problems have been analysed.

Table 57

Attendance of Higher Secondary Students (N=145)

Sl. No.	Items	Yes
1	Students attended the class in time	127 (87.59)
2	Regularly entered attendance	134 (92.41)
3	Any irregularity problems	19 (13.10)

Higher secondary students attended the class in time reported by 87.59% higher secondary teachers. (92%) of higher secondary teachers entered the attendance regularly. 13.10% agreed that there were irregularity problems.

Major irregularity problems and its consequences pointed out by teachers were:

1. Irregularity affects classes
2. Increases number of bike accidents
3. Irregular students creates problems to class time
4. Time for co curricular activity reduced

Individual Attention

Table 58

Individual Attention in HSS

Sl. No.	Items	Yes
1	Able to give individual attention	103 (71.03)
2	Repeated difficult sections of the lessons in the class	128 (88.28)
3	Existing teacher pupil ratio hinder for giving individual attention	111 (76.55)

The result revealed that 71.03% of higher secondary teachers stated that they were able to give individual attention and 88.28% argued that they repeated difficult portions in the class. 76.55% teachers agreed that existing teacher pupil ratio hindered for giving individual attention.

Measures to Below Average Students by Higher Secondary Teachers

Analysis has been done for the obtained data about measures adopted by the higher secondary teachers for handling below average students. The following are the results obtained.

Table 59

Measures Adopted to Handle Below Average Students by Higher Secondary Teachers (N=145)

Sl. No.	Measures to Handle Below Average	No of Responses
1	Repeat difficult portions	109 (75.17)
2	Give extra time	65 (44.83)
3	Give motivation/reward	76 (52.41)
4	Provide remedial teaching	85 (58.62)
5	Try to involve them in main stream activity	70 (48.28)
6	Group form with team leader	1 (0.69)
7	Give mental exercise	1 (0.69)

From Table 59, it can be understood that 75.17% of higher secondary teachers repeat difficult portions in the class . Of the teachers 58.62% provide

remedial teaching, 52.41% give motivation/ reward, 48.28% try involve them in the main stream activities, 44.83% give extra time to them.

Measures to handle gifted students by higher secondary teachers

The gathered data regarding the measures adopted to handle gifted students by higher secondary teachers have been analysed. The analysis reveals the following results.

Table 60

Measures Adopted to Handle Gifted Students by Higher Secondary Teachers (N= 145)

Sl. No.	Measures to Handle Gifted	No of Responses
1	Give enrichment activities	82 (56.55)
2	Assign different tasks	64 (44.14)
3	Independent projects	40 (27.59)
4	Open forums/debates	49 (33.79)
5	Encouraged to participate extracurricular activities	81 (55.86)
6	Academic contests	54 (37.24)
7	Publishing magazines, wall magazines	1 (0.69)
8	Answering more question papers	1 (0.69)

From Table it is clear that the higher secondary teachers adopted various measures to handle gifted students in the class. 56.55% teachers give

enrichment activities, 55.86% encouraged them to participate extracurricular activities, 44.14% assign different tasks, 37.24% organize academic contests, 33.79% conduct debates, 27.59% gave independent projects, and publication of magazines and answering more previous question papers (.69).

Evaluation in Higher Secondary Schools

Evaluation of student in the process of examination is a measure of learning and academic status (Bharli, 2006). Data regarding different aspects of evaluation have been analysed in this section.

Table 61

Evaluation in Higher Secondary Schools (N=145)

Sl. No.	Items	Yes
1	Adopt regular self evaluation to assess the effectiveness of instruction	127 (87.59)
2	Unit tests conducted at the end of each unit	119 (82.07)
3	Valued sheets given back in time	131 (90.34)
4	Maintain students profile based on CCE	118 (81.38)
5	Ensure objectivity of unit tests	109 (75.17)
6	Valuation camp during vacation create difficulties	18 (12.41)
7	Camp valuation effective	99 (68.28)

Under the existing educational atmosphere in higher secondary schools, 87.59% of higher secondary teachers adopted regular self evaluation to assess

effectiveness of instruction.82.07% teachers stated that they conducted unit test at the end of each unit. 90.34% opined that they had given back valued answer sheets in time.81.38% teachers opined that they maintained students profile based on CCE.75.17% agreed that they had ensured objectivity of unit test. 12.41% stated that valuation camp during vacation had created various difficulties to them. 68.28%opined that camp valuation was effective.

The following procedures were adopted for self evaluation by higher secondary teachers:

Procedure adopted for self evaluation by higher secondary teachers.

Higher secondary teachers in Kerala adopted various procedures for self evaluation.

Table 62

Procedures Adopted for Self Evaluation by HSS Teachers (N=145)

Sl. No.	Procedures adopted for self evaluation	No of responses
1	Self monitoring	81 (55.86)
2	Student's feedback	108 (74.48)
3	AV recording	8 (5.52)
4	Checking assignment and test result	79 (54.48)
5	Introspection	1 (0.69)
6	Asking other teachers (peer evaluation)	1 (0.69)

Table 62 reveals that higher secondary teachers adopted the various procedures for self evaluation. Collecting student's feed back by 74.48%, Self monitoring was done by 55.86%, self evaluation was done through checking of assignment and test result by 54.48, self evaluation done through recording of class room activities by 5.52% and introspection and peer evaluation done by .69%.

Problems in ensuring the objectivity of test.

In order to ensure the objectivity of unit test the HSS teachers faced the following constraints:

1. Large number of students created problem in ensuring objectivity
2. Lack of time
3. Chances of mass copying
4. Unit test are conducting in the class room itself so it is difficult to administer properly
5. Mal practices during class test

Table 63

Problems in Ensuring the Objectivity of Unit Test (N=36)

Sl. No.	Problems in Ensuring the Objectivity of Test	No of Responses
1	Large number of students created problem in ensuring objectivity (large no of students 7*60=420:1)	33 (91.67)
2	Lack of time	3 (8.33)
3	Chances of mass copying	0
4	Unit test are conducting in the class room itself so it is difficult to administer properly	1 (2.78)
5	Mal practices during class test	1 (2.78)

Data in Table 63 reveal that in order to ensure the objectivity of unit test the HSS teachers faced constraints due to high student ratio, inadequacy of time, and administration issues. The major problem was due to high student ratio in the class (91.67%)

Constraints in evaluating student's performance by higher secondary teachers

Table 64

Constraints in Evaluating HSS Student's Performance (N=145)

Sl. No.	Constraints in Evaluating Student's Performance	No of Responses
1	On the spot evaluation of group work	96 (66.21)
2	Evaluating home work in time	90 (62.07)
3	Evaluate each student through project	88 (60.69)
4	Evaluate information collected through discussion, observation	80 (55.17)
5	Evaluate seminar work	85 (58.62)
6	Evaluate social values nurtured	68 (46.89)

Of the teachers 66.21% higher secondary teachers responded that the major constraint in evaluation was on the spot evaluation of group work, 62.07% of teachers opined that evaluation of homework in time is the major problem faced by them, 60.69% faced difficulties in the evaluation of project, 58.62% have problem in seminar evaluation, evaluation of discussion and observation was the constraint before 55.17% teachers and evaluation of social values is the constraint faced by 46.89% teachers.

Difficulties in the camp valuation during vacation.

The major difficulties reported by teachers due to camp valuation include:

1. Teachers faced difficulties to care children during vacation,
2. Dusty atmosphere in valuation camp creates problem and ensure class room availability
3. Lost a lot of experiences obtained through vacation trips
4. Time allotted for valuation is 9 AM -1PM, willing teachers must be given priority with perks for additional duty
5. Valuation camp in distant place creates problem
6. Problems due to valuation of numerous answer sheets, and
7. They also suggest that it must be requisitive not compulsory.

In order to improve the camp valuation the following suggestions were made:

1. Strict administration of valuation camp is needed
2. Compulsory to all
3. Form school level discipline in the camp
4. Enhance remuneration
5. Marks are given illogically, take actions to control this
6. Provide calm environment for ensuring concentration
7. Valuation camp should be at district head quarters
8. Provide adequate facilities for teachers
9. Ensure deserving marks to students by proper administration

The following are the constraints felt by higher secondary teachers in working with continuous and comprehensive evaluation at higher secondary level.

Table 65

Constraints in CCE (N=145)

Sl. No.	Constraints in CCE	No of Responses
1	Difficulty in recording the details in time	80 (55.17)
2	Evaluate practical work	62 (42.76)
3	Evaluate social values	83 (57.24)
4	Inadequate time	98 (67.59)
5	On the spot evaluation of group activities	81 (55.86)
6	Over loaded work	58 (40)
7	Teachers simply assign marks	41 (28.28)
8	High teacher pupil ratio	79 (54.48)

Data in Table 65 reveal the constraints felt by higher secondary teachers in working with CCE. 55.17% higher secondary teachers faced constraints in working with CCE was due to difficulty in recording the details of evaluation in time, 42.76% perceive difficulties in the evaluation of practical work, evaluation of social values is the constraint faced by 57.24%, inadequate time for evaluation is the constraint before 67.59%, and on the spot evaluation of group activities is the constraint faced by 55.86%. Other constraints reported

by the teachers include over loaded work (40), unscientific way of giving marks (28.28), and high teacher pupil ratio (54.48).

Teacher Training

Teacher training in the changing system helps better learning by students. The training needs as reported by higher secondary teachers were analysed and presented in Table 66.

Table 66

Training Needs of Higher Secondary Teachers (N=145)

Sl. No.	Items	Yes
1	Attended any training for managing adolescents	83 (57.24)
2	Attended in-service courses	85 (58.62)
3	Monthly inservice training is needed	4 (2.76)
4	Inservice training is needed on terminal basis	15 (10.34)
5	Yearly inservice training is needed	101 (69.66)

Only 57.24% higher secondary teachers reported that they received various training programmes to manage adolescents. They also reported that this training helped them to share different ideas about adolescents management. 58.62% reported that they attended various inservice courses. 27.59% higher secondary teachers attended 5 days management training programmes. 69.66% teachers stated that they would like to attend in-service training once in a year.

In service courses attended by higher secondary teachers.

Inservice courses attended by teachers include management training programme, TB awareness programme, souhrida training, One week Course for improving maths contents, Curriculum awareness training, 3 days IT training, 3 days training on CCE, Course for better application of teaching aid, four days training to improve text book experience, training on new text book evaluation, Faculty development programmes, and Course for updating subject knowledge.

Duration of the above programmes is not more than one week. Duration of majority training programmes was limited to three or four days.

Shortcomings of inservice courses

- Provide training in June or July itself
- Utilise and manage training time efficiently
- Resource persons are not qualified in some training programmes, ensure their quality
- Training programmes time affects class time.
- Training should be given at the beginning of the academic year not at the end.
- Training should be more objective specific with objective specific activities.
- Lack of time due to training on the working days.
- Lack of qualified IT trainers.
- Several occasions training was not up to the expectation of teachers.
- Training is not activity oriented only lecturing with power points is the strategy adopted for training programmes
- Teachers cannot get clusters in time ie at the end of a year

- Time shortage and
- Application of training skills not practicable in many cases.

Areas in which training needed to higher secondary teachers

The major areas reported by the higher secondary teachers for training include the following.

Teaching learning areas.

- Learning
- Syllabus
- Content knowledge
- Updating Subject
- New approaches to teaching and learning
- Technology
- Contents
- Text book updation

Subjects area.

- Genetics
- Microeconomics
- CAT
- Information Technology
- Human genome project
- DNA finger print by expert in the respective field
- Molecular biology
- Latest development taking place in the field of language learning

Others.

- Management training
- Emotional development
- Career guidance
- Psychological training
- Audio Visual aids
- Moral development of students

Activities Other than Academic Activities

Data regarding activities other than academic work presented in the Table 67.

Table 67

Other Activities in Higher Secondary Schools (N=145)

Sl. No.	Items	No of responses
1	Souhrida club	92 (63.45)
2	ASAP	77 (53.10)
3	Nature club	77 (53.10)
4	NSS	75 (51.72)
5	School parliament	62 (42.76)
6	Arts club	52 (35.86)
7	Social club	43 (29.66)
8	Language club	42 (28.97)

Sl. No.	Items	No of responses
9	NCC	17 (11.72)
10	Thanal koottu	12 (8.28)
11	Scout	3 (2.07)
12	CGAC	3 (2.07)
13	Film club	3 (2.07)
14	Science club	1 (0.69)

Data in Table reveal that various clubs are functioning efficiently in higher secondary schools. The clubs functioned in higher secondary schools are Souhrida club, Additional Skill Acquisition Programme, Nature club, National Service Scheme, School parliament, Arts club, Social club, Language club, National Cadet Corps, Thanal koottu, Scout, Career Guidance and Adolescence Counselling, Film club, and Science club

School Administration

This item deals with whether the teachers are satisfied with general discipline in higher secondary school. 111 (76.55) teachers are of the opinion that they are satisfied with the discipline in their schools. 34 (23.45) opined that they were not satisfied with the general discipline in their school and they suggested that there was a need to provide awareness about duties and responsibilities of each child, reduce teacher pupil ratio and give guidance to students.

Change in Working Days and Time

Only 49.66% teachers agreed that new time schedule was better than earlier time schedule in higher secondary schools in Kerala.

Problems in new schedule reported by teachers are the following.

1. New schedule totally inconvenient for students and teachers, students feel boring in studies and it creates stress to students
2. Our school situated in remote area so students reach home very late. Parents are anxious and tensed when the children reach late
3. Stress to students to reach 8.50 am and leave at 4.45 pm considering poor travelling facilities. It is difficult to students to reach their home in time
4. Unable to co ordinate with other sections (Lower primary, Upper Primary, and High school)
5. Students cannot concentrate over a long duration especially the last period are of no use
6. Students became restless in the afternoon session as they do not get enough time for work outside the class room
7. New time schedule benefited only to tuition centers and HSST's taking private tuitions
8. Lack o f interval time creates problems to students for refreshment and relaxation
9. Students lost their attention during the last 2 or 3 periods they are mentally tired

Parent Teacher Association in Higher Secondary Schools

Table 68

Functioning of PTA in Higher Secondary Schools (N=145)

Sl. No.	Items	Yes
1	PTA act sufficiently in school	117 (80.69)
2	It support various activities	115 (79.31)
3	Satisfied with working of PTA	100 (68.97)

As indicated by Table 68, 80.69% higher secondary teachers opined that PTA act sufficiently in school. 68.97% teachers were satisfied with functioning of PTA. 79.31% teachers' state that PTA support various activities of school.

Reasons for improper functioning of PTA.

Reasons for the dissatisfaction in the functioning of PTA reported by teachers consist of the following.

- PTA doesn't take steps for providing laboratory facilities and equipments. For improving the efficiency more involvement is needed from the part of PTA.
- PTA considers only the overt performance they are not internally motivated.
- Lack of educated members in PTA creates various problems.
- PTA is unaware about the academic performance of students
- There is conflicts between different sections such as high school, higher secondary and vocational higher secondary. So separate PTA is needed for higher secondary section.

Duties Other Than Academic Work

Table 69

Duties Other than Academic Work in HSS

Sl. No.	Items	Frequency
1	Souhrida club coordinator	7
2	Discipline management	6
3	Office work	5
4	Co curricular activities	5
5	Admission duties	5
6	Scholarship distribution charge	5
7	Arts club programmes	4
8	Sports club activities	4
9	Students tour co ordinator	4
10	HITC	3
11	Bhoomithra sena	3
12	Office administration	3
13	Thanal koottu activities	2
14	ASAP coordinator	2
15	Career guidance activities	2
16	Science exhibition	2
17	Text book distribution	2
18	Harithasena	2
19	Scout	1
20	Vocational training programmes in charge	1
21	Library in charge	1
22	NSS co ordinator	1
23	Documentation of school programme	1
24	festival coordinator	1
25	Wall magazine coordinator	1
26	Spark	1
27	Counselling	1
28	Principal duties	1

In addition to teaching a number of other duties were performed by the higher secondary teachers like coordinator of various clubs, admission, principal in charge etc.

Suggestion of the Higher Secondary Teachers for the Improvement of System

The important suggestions of HSS teachers include restructuring of curriculum, change the time schedule for HSS, provide timely training to teachers, distribute hand book and text book in time, provide adequate facilities, proper administration of system, avoid grace mark to students, avoid delay in plus one allotment process, reduce teacher pupil ratio, separate PTA for HSS, reduce the work load of teachers, and exempt principal from teaching.

Discussion

The analysis of data obtained through questionnaire on the 14 dimensions taken for the study reveals the following.

Library facilities.

Regarding availability of dictionaries and other reference materials higher secondary teachers opined that dictionaries and other reference materials are adequate in school library. Majority of higher secondary teachers opined that they (97%) encouraged students for reading. Higher secondary teachers also reported problems in the utilization of library facilities.

Higher secondary teachers perceive that problems in the utilization of library facilities is due to lack of well set up libraries, lack of proper time for

the utilization of facility, lack of facilities like librarian, reading facilities, books, lack of students interest, non availability of teacher in charge, and high students ratio in HSS.

Curriculum.

- Result of the study reveals that more than half of higher secondary teachers believed that syllabus was adequate. In the opinion of majority of teachers student centered teaching is effective for their subject and they have adequate time for preparation. More than sixty percent of higher secondary teachers students did not reach higher secondary after attaining minimum standards of learning at secondary stage. More than half of teachers agreed that they gave remedial lessons to the needy students.
- Suggestion regarding further improvement of syllabus include latest information in the syllabus, reduce the irrelevant contents, rearrange and order the contents according to time and consider the learners age. They also suggest need of sequential ordering of content.
- Constraints faced by higher secondary teachers in student centered curriculum transaction include high student ratio, lack of adequate time, bulky syllabus, and lack of facilities in class room.
- The percentage of opinion regarding Constraints faced by higher secondary teachers in advance preparation for the class is due to lack of time, over loaded work, lack of proper method, lack of modern technologies, lack of reference room, office burden, more contents, etc.

Text book.

The analysis reveals that majority of higher secondary teachers' opined that text books were effective in planning class room instruction and contents in the text book were appropriate for attaining the objective. The sequencing of the content in the text book was not logically organized in the order of difficulty. The non availability of hand books is reported by majority of teachers. Most of the teachers agreed that syllabus is overloaded. Restructuring of existing higher secondary syllabus is one of the important suggestion made by higher secondary teachers. Majority of teachers agreed that the higher secondary syllabus was not according to the ability of students. Availability of modern technologies was reported by 64.83% higher secondary teachers. More than half of the teachers agreed that they utilised modern technologies in the class rooms. Adequate time is not available for effective curriculum transaction at higher secondary.

In the opinion of teachers all audio visual aids except black board are inadequate. In addition to it the available teaching aids in the school include computer, Projector, Models, film, recordings, photograph and pictures.

Laboratory facilities.

In providing instruction and guidance some HSS teachers felt difficulties. HSS teachers are able to ensure that every student doing practical work and to provide individual instruction. They opined that, students get enough practical skill through lab work.

The major short comings in the laboratory were lack of adequate instruments, adequate space, appropriate practical syllabus, lack of chemicals, equipments, glass wares, etc, lack of separate lab for each subject, and high teacher pupil ratio.

Attendance.

Most of the HSS teachers agreed that students attended the class in time(87.59%) and entered regularly (92%). Irregularity problems and its consequences pointed out by teachers (13.01%)were: Irregularity affects classes, irregular students engaged other outside activities and it increases number of bike accidents, Irregular students creates problems to class time, and Time for co curricular activity reduced.

Individual attention.

- Majority of HSS (71.03) teachers were able to give individual attention. More than 80% of teachers repeated difficult portions in the class. Existing teacher pupil ratio in higher secondary schools creates hindrance for giving individual attention. Higher secondary teachers adopted various measures to handle gifted students in the class such as give enrichment activities, encouraged them to participate extracurricular activities, assign different tasks, organize academic contests, conduct debates, gave independent projects, and publication of magazines and answering more previous question papers.
- Teachers adopt various measures to handle below average students such as repeat difficult portions, provide remedial teaching, motivation/reward when complete the task in time, give extra time, try to involve them in main stream activity, form groups with leader, and give mental exercises.

Evaluation.

Under the existing educational atmosphere in higher secondary schools, most of higher secondary teachers adopted regular self evaluation to

assess effectiveness of instruction. More than teachers stated that they conducted unit test at the end of each unit. Most of the higher secondary teachers had given back valued answer sheets in time. Higher secondary teachers opined that they maintained students profile based on CCE. Most of the higher secondary teachers ensured objectivity of unit test. A very few higher secondary teachers stated that valuation camp during vacation create various difficulties to them and majority of them opined that camp valuation was effective. Higher secondary teachers adopted the various procedures for self evaluation such as collecting student's feedback, self monitoring, checking of assignment and test result, recording of class room activities and introspection and peer evaluation.

For ensuring the objectivity of unit test the HSS teachers faced the constraints like, large number of students created problem in ensuring objectivity, lack of time, chances of mass copying, unit test are conducting in the class room itself so it is difficult to administer properly, and, mal practices during class test.

The major constraints area in evaluation felt by the higher secondary teachers in student's performance include on the spot evaluation of group work, evaluation of home work in time, evaluation of project, seminar, discussion, observation and evaluation of social values.

The major difficulties reported by teachers due to camp valuation include Teachers faced difficulties to care children during vacation, Dusty atmosphere in valuation camp creates problem and ensure class room availability, Lost a lot of experiences obtained through vacation trips, Time allotted for valuation is 9 AM -1PM, willing teachers must be given priority with perks for additional duty, Valuation camp in distant place creates

problem, Problems due to valuation of numerous answer sheets, and They also suggest that it must be requisite not compulsory.

The constraints felt by higher secondary teachers in the conduct of CCE include lack of adequate time, evaluation of social values, evaluating group activities on the spot, difficulty in recording details of evaluation in time, high teacher pupil ratio, evaluation of practical work, excess work load, and lack of proper guidelines for assessment.

Suggestions for the effective camp valuation include Strict administration of valuation camp is needed, compulsory to all, form school level discipline in the camp, enhance remuneration, marks are given illogically, take actions to control this, provide calm environment for ensuring concentration, valuation camp should be at district head quarters, provide adequate facilities for teachers, and ensure deserving marks to students by proper administration.

Teacher training.

Teachers attended various in-service training courses and attended various training programmes to manage adolescents. Most of the teachers interested to improve their professional competency by attending in-service programmes once in year. Teachers have given suggestions for future training programme some of these are training to improve their existing knowledge and meet the situations in schools.

Other activities.

Various clubs are functioned efficiently in higher secondary schools. The clubs functioned in higher secondary schools are Souhrida club, Additional Skill Acquisition Programme, Nature club, National Service

Scheme, School parliament, Arts club, Social club, Language club, National Cadet Corps, Thanalkoottu, Scout, Career Guidance and Adolescence Counselling, Film club, and Science club.

School administration.

Majority of HSS teachers satisfied with general discipline in school. The teachers who are not satisfied with general discipline in their school put forth certain suggestions such as provide awareness about duties and responsibilities to students, reduce teacher pupil ratio and give guidance to students for better discipline.

Reform in the time schedule.

Only fifty percent of the HSS teachers agreed that new time schedule is better than earlier time schedule in higher secondary schools in Kerala. Major problems reported by the HSS teachers in the new time schedule include it is totally inconvenient for students and teachers, students feel boring in studies and it create stress to students, our school situated in remote area so students reached home very late. Parents are anxious and tensed when the children reached late, stress to students to reach 8.50 am and leave at 4.45 pm considering poor travelling facilities and it is difficult to students to reach their home in time, unable to co ordinate with other sections (Lower primary, Upper Primary, and High school), students cannot concentrate over a long duration especially the last period are of no use, students became restless in the afternoon session as they do not get enough time for work outside the class room, new time schedule benefited only to tuition centers and HSST's taking private tuitions, lack o f interval time create problems to students for refreshment and relaxation, and students lost their attention during the last 2 or 3 periods they are mentally tired.

PTA in higher secondary schools.

Majority of HSS teachers were opined that PTA act sufficiently in school and teachers were satisfied with functioning of PTA. Majority of them state that PTA supports various activities of school. Lack of involvement, proper evaluation, unawareness of academic matters, and conflicts in the decision making process are the major reasons reported by higher secondary teachers in the improper functioning of PTA.

Duties other than academic work.

In addition to teaching a number of other duties were performed by the HSS teachers like coordinator of various clubs, admission, principal in charge etc.

Suggestions.

The important suggestions of HSS teachers include restructuring of curriculum, change the time schedule for HSS, provide timely training to teachers, distribute hand book & text book in time, provide adequate facilities, proper administration of system, avoid grace mark to students, avoid delay in plus one allotment process, reduce teacher pupil ratio, separate PTA for HSS, reduce the work load of teachers, and exempt principal from teaching.

Response of Teachers of

Vocational Higher Secondary Schools in Kerala

This section deals with the analysis of data collected from teachers of vocational higher secondary schools in Kerala. The data collected from 37 vocational higher secondary teachers were analysed on the basis of response made by them. The data collected through Questionnaire meant for vocational

higher secondary teachers were analysed and interpreted in Part D of this chapter. The analysis of the data and suggestions made by them on each dimension are as follows.

Library Facilities in Vocational Higher Secondary Schools

Data obtained regarding vocational higher secondary libraries from vocational higher secondary teachers (37) have been analysed. The analysis revealed the following result:

Table 70

Library Facilities in Vocational Higher Secondary Schools (N=37)

Sl. No.	Items	Yes
1	Dictionaries and other reference materials available to the students	31 (83.78)
2	Encourage reading habit of students	36 (97.3)
3	Any problems in utilizing library facilities by students	11 (29.73)

As indicated by the Table 70, 83.78% of vocational higher secondary teachers opined that dictionaries and other reference materials were available in library. According to Table, 97.3% teachers agreed that they encouraged reading habit among students.

Table 70 also indicates that 11 or 29.73% vocational higher secondary teachers state that there were problems in the proper utilization of library facilities in vocational higher secondary schools.

Table 71

Problems in Utilization of Library Facilities

Sl. No.	Problems in utilization of library facilities	No of Responses
1	Students get less time for library because of the routine work load for doing assignment projects etc	6
2	Not well set up- reading room, shelf only	3
3	Lack of adequate books in the library	2
4	Single library for HSS & VHSS	1

Lack of adequate time due to routine work load is the problem reported by 6 vocational higher secondary teachers and 3 teachers' state that the problem was because of lack of reading rooms and facilities in vocational higher secondary schools. Another 2 teachers stated that lacks of adequate books are still a major problem to utilise library properly. One teacher reported that the problem was because of single library for higher secondary and vocational higher secondary.

Curriculum

Data obtained regarding vocational higher secondary curriculum from higher secondary teachers (37) have been analysed. The analysis revealed the following result:

Table 72

Vocational Higher Secondary Curriculum (N=37)

Sl. No.	Items	Yes
1	The existing syllabus is adequate	30 (81.08)
2	The student centered teaching was effective for your subject	18 (48.65)
3	Adequate time for preparation	33 (89.19)
4	Students reached higher secondary class after attain minimum level of learning	5 (13.51)
5	Find time to provide remedial lessons	23 (62.16)

Table 72 shows that a considerable number of vocational higher secondary teachers (81.08) felt that the existing syllabus was adequate. 18(48.65) vocational teachers were of the opinion that student centered teaching was effective for their subjects. 89.19% agreed that they had adequate time for preparation. Only 13.51% agreed that students reached after attaining minimum level of learning. 62.16% vocational higher secondary teachers provided remedial lessons for those who lack prerequisite knowledge.

In order to improve the syllabus of vocational higher secondary education the following suggestions were made:

Table 73

Suggestion Regarding Further Improvement of Vocational Higher Secondary Syllabus

Sl. No.	Suggestion regarding further improvement of syllabus	No of responses
1	Reduce irrelevant contents	7
2	Include latest informations in the existing syllabus	5
5	Rearranged according to time and age of learner	2

Suggestions regarding improvement of syllabus includes 7 vocational teachers suggested that reduce the contents which are irrelevant, 5 teachers argued that include latest information and 2 teachers suggest that it was necessary to rearrange the existing vocational higher secondary syllabus according to time and age.

Teachers have cited various constraints for student centered curriculum transactions. The following constraints have been cited:

Table 74

Constraints Faced by VHSS Teachers in Student Centered Curriculum Transaction

Sl. No.	Constraints faced by teachers in student centered curriculum transaction	No of Responses
1	Large number of Students in the class	18 (48.65)
2	Bulky syllabus	19 (51.35)
3	Time constraints	18 (48.65)
4	Classroom was not well equipped	1 (2.7)

From the Table 74 it was clear that vocational higher secondary teachers had given 4 constraints in student centered curriculum transactions. According to 19 Vocational higher secondary teachers the constraints behind the student centered curriculum transaction was due to bulky syllabus at vocational higher secondary. 18 vocational higher secondary teachers opined that student centered teaching was not possible because large number of students accommodated in one class and lack of adequate time for curriculum transaction. Lack of well equipped class room also hinder the student centered teaching at vocational higher secondary. Vocational higher secondary teachers haven't reported any constraints in advance preparation of class.

Text Book in Vocational Higher Secondary

The Table shows the details of the analysis of Text books in the vocational higher secondary as reported by vocational higher secondary teachers

Table 75

Text Book in Vocational Higher Secondary

Sl. No.	Items	Yes
1	Text book is effective in planning class room instruction	28 (75.68)
2	Contents in the text book are appropriate for acquiring the objectives	27 (72.97)
3	Text book is efficient as teaching aid	24 (64.86)
4	Contents in the text book is accurate	17 (45.94)
5	Structure of the text book is good	13 (35.14)

Sl. No.	Items	Yes
6	Language used in the text is simple	13 (35.14)
7	Accurate printing of the content	12 (32.43)
8	Readability of the content is fully sufficient	3 (8.11)
9	Appropriate illustrations	7 (18.92)
10	Mechanical make is good	4 (10.81)
11	Contents in the text book are logically organised	22 (59.46)
12	Hand books available in your school	13 (35.14)
13	Modern technologies available in your school	21 (56.76)
14	Utilise modern technologies in the class room	16 (43.24)
15	Syllabus is overloaded	19 (51.35)
16	Need restructuring of existing syllabus	22 (59.46)
17	Some topics are irrelevant in the syllabus	17 (45.95)
18	Syllabus is according to ability of students	18 (48.65)
19	Adequate time is available for effective curriculum transaction	18 (48.65)

From the Table 75 it was clear that out of 37 vocational higher secondary teachers 28 are of the opinion that text book is effective in planning class room instruction and 72.97 argued that contents in the text book was appropriate for attaining the objective. 59.46% higher secondary teachers were opined that contents in the text books were logically organized in the order of difficulty. 35.14% agreed that handbooks were available in school.

51.35% argued that syllabus is overloaded. 59.46% suggested to restructuring of existing higher secondary syllabus. Only 48.65% agreed that the syllabus was according to the needs and ability of students.

In vocational higher secondary 56.76% teachers opined that modern technologies were available in their school. 43.24% agreed that they utilise modern technologies in the class room.

The following suggestions were obtained for the improvement of vocational higher secondary text book:-

- Include more illustrations in the text book

Curriculum Transactions

In the case of vocational higher secondary 48.65% teachers are of the opinion that adequate time is available for effective curriculum transaction.

Vocational higher secondary teachers have suggested the following reasons for inadequate time for curriculum transaction:

Table 76

Reasons for Inadequate Time for Transacting VHSS Curriculum

Sl. No.	Reasons for Inadequate Time for Transacting Curriculum	No of Responses
1	No enough time to plus one due to delay in admission procedure	3 (8.11)
2	Over loaded syllabus	1 (2.7)
3	Inadequate class room facilities	1 (2.7)
4	Poor academic & intellectual capacity of students	1 (2.7)

Reasons for inadequate time for transacting curriculum of higher secondary schools reported by teachers include delay in the admission process, over loaded syllabus, lack of facilities in the class room for proper instructions, and poor concept attainment of students.

Audio Visual Aids in Vocational Higher Secondary

Table 77

Available AV Aids in Vocational Higher Secondary

Sl. No.	Audio visual aids in vocational higher secondary	No of Responses
1	Computer	23 (62.16)
2	Projector	22 (59.46)
3	Models	12 (32.43)
4	Recordings	4 (10.81)
5	Film	1 (2.7)

The vocational higher secondary teachers agreed that available teaching aids in vocational higher secondary includes Computer (62.16), Projector (59.46), Models (32.43), Recordings (10.81), and Film (2.7).

Laboratory Facilities in Vocational Higher Secondary Schools

The availability and utilization of laboratory facilities as reported by vocational higher secondary teachers were analysed separately and presented below.

Details of the analysis of laboratory facilities in the vocational higher secondary schools of Kerala as reported by vocational higher secondary teachers are given in Table 78.

Table 78

Laboratory Facilities in Vocational Higher Secondary Schools (N=24)

Sl. No.	Items	Yes
1	Feel any difficulties in providing instruction during experiment	10 41.67
2	Ensured every student doing experiments/Lab work	21 87.5
3	Ensured students get enough practical skill through lab work	18 75
4	Teacher got adequate time to give individual instruction	14 58.33
5	Feel any shortcomings in the lab	11 45.83

In providing instruction during experiment 41.67% vocational teachers stated that they feel difficulties in providing instruction during the experiment. 87.5% vocational higher secondary teachers ensured doing of lab work by each student. 75% ensure that students got enough practical skill through lab work. 58.33% agreed that they got adequate time to give individual instruction. 45.83 percent or 11 vocational teachers state that they feel shortcomings in the lab.

The following shortcomings are reported by vocational higher secondary teachers in the laboratory:

Table 79

Shortcomings in the Lab Reported by Vocational Higher Secondary Teachers (N = 11)

Sl. No.	Shortcomings in the Lab	No of Responses
1	Certain Instruments are lacking, and needed updation	5
4	Lack of space(class room used for lab)	3
5	Lack of separate lab	4
9	Plate making equipment needed	2
10	Computer system and net work	1

The shortcomings in the laboratory reported by vocational higher secondary teachers include the following. Lack of instruments and equipments, adequate space, separate laboratory for subjects, computer system and net work are the major shortcomings reported by vocational higher secondary school teachers.

Attendance

Attendance book is a statutory record that must kept on individual class basis by every school. The data obtained for the keeping of attendance register and irregularity problems have been analysed in this section.

Table 80

Attendance of Vocational Higher Secondary Students (N=37)

Sl. No.	Items	Yes
1	Students attended the class in time	35 (94.59)
2	Regularly entered attendance	36 (97.3)
3	Any irregularity problems	1 (2.7)

Higher secondary students attended the classes in time is reported by 94.95% vocational teachers. Teachers entered the attendance regularly (97%). Only one teacher reported the irregularity problems among students.

Individual Attention

Details of the analysis of individual attention in the vocational higher secondary schools of Kerala as reported by vocational higher secondary teachers presented in the following Table 81

Table 81

Individual Attention to VHSS Students

Sl. No.	Items	Yes
1	Able to give individual attention	28 (75.68)
2	Repeat difficult sections in the class	30 (81.08)
3	Existing teacher pupil ratio hinder for giving individual attention	20 (54.05)

The result reveals that 75.68% of vocational higher secondary teachers were able to give individual attention and 81.08% argued that they repeated difficult portions in the class. 54.05% teachers agreed that existing teacher pupil ratio hinder for giving individual attention.

Table 82

Measures Adopted to Handle Below Average Students by Vocational Higher Secondary Teachers

Sl. No.	Measures to Handle Below Average	No of Responses
1	Repeat difficult portions	21 (56.76)
2	Give extra time	12 (32.43)
3	Motivation/reward	16 (43.24)
4	Provide remedial teaching	20 (54.05)
5	Try to involve them in main stream activity	14 (37.84)

From Table 82, it can be understood that 56.76% of vocational higher secondary teachers repeated difficult portions in the class. Of the teachers 54.05% provide remedial teaching, 43.24% give motivation/ reward, 37.84% try involve them in the main stream activities, 32.43% give extra time to them.

Table 83

Measures Adopted to Handle Gifted Students by Vocational Higher Secondary Teachers

Sl. No.	Measures to Handle Gifted Students	No of Responses
1	Give enrichment activities	18 (48.65)
2	Assign different tasks	17 (45.95)
3	Independent projects	10 27.03

Sl. No.	Measures to Handle Gifted Students	No of Responses
4	Open forums/debates	10 (27.03)
5	Encourage to participate extracurricular activities	13 (35.14)
6	Academic contests	10 (27.03)

From Table 83, it is clear that the vocational higher secondary teachers adopted various measures to handle gifted students in the class. 48.65% teachers give enrichment activities, 35.14% encouraged those to participate in extracurricular activities, 45.95% assign different tasks, 27.03% organize academic contests, 27.03% conduct debates, and 27.03% gave independent projects.

Evaluation in Vocational Higher Secondary Schools

Data regarding different aspects of evaluation had analysed in this section.

Table 84

Evaluation in Vocational Higher Secondary Schools

Sl. No.	Items	Yes
1	Adopt regular self evaluation to assess the effectiveness of instruction	31 (83.78)
2	Unit tests conducted at the end of each unit	30 (81.08)
3	Valued sheets given back in time	30 (81.08)
4	Maintain students profile based on CCE	28 (75.68)

Sl. No.	Items	Yes
5	Ensure objectivity of unit tests	25 (67.57)
6	Valuation camp during vacation create difficulties	0
7	Camp valuation effective	28 (75.68)

Under the existing educational atmosphere in vocational higher secondary schools 83.78% vocational higher secondary teachers adopt regular self evaluation to assess effectiveness of instruction. 81.08% teachers stated that they conducted unit test at the end of each unit. 81.08% opined that they given back valued answer sheets in time. 75.68% teachers opined that they maintained students profile based on CCE. 67.57% agreed that they had ensure objectivity of unit test. Cent percent stated that valuation camp during vacation doesn't create difficulties to them. 75.68% opined that camp valuation was effective.

The following procedures were adopted for self evaluation by vocational higher secondary teachers:

Table 85

Procedure Adopted for Self Evaluation by Vocational Higher Secondary Teachers

Sl. No.	Procedure Adopted for Self Evaluation	No of Responses
1	Self monitoring	17 (45.95)
2	Student's feedback	21 (56.76)
3	AV recording	1 (2.7)
4	Checking assignment and test result	20 (54.05)

Table 85 reveals that vocational higher secondary teachers adopted the various procedures for self evaluation. Collecting student's feed back by 56.76%, self monitoring was done by 45.95%, self evaluation was done through checking of assignment and test result by 54.05, and self evaluation done through recording of class room activities by 2.7%.

Table 86

Constraints in Evaluating Student's Performance by Vocational Higher Secondary Teachers

Sl. No.	Constraints in evaluating student's performance	No of Responses
1	On the spot evaluation of group work	18 (48.65)
2	Evaluating home work in time	22 (59.46)
3	Individual assessment of project	12 (32.43)
4	Evaluate information collected through discussion, observation	14 (37.84)
5	Evaluating seminar work	12 (32.43)
6	Evaluating social values nurtured	11 (29.73)

Of the teachers 48.65% of vocational higher secondary teachers responded that the major constraint in evaluation was on the spot evaluation of group work, 59.46% of teachers opined that evaluation of home work in time is the major problem faced by them, 32.43% faced difficulties in the evaluation of project, 32.43% have problem in seminar evaluation, evaluation of discussion and observation was the constraint before 37.84% teachers and evaluation of social values is the constraint faced by 29.73% teachers.

Table 87

Suggestions for Effective Camp Valuation

Sl. No.	Suggestions for Effective Camp Valuation	No of Responses
1	Strictness	6 (16.22)
2	Compulsory to all	3 (8.11)
3	Form school level discipline	4 (10.81)
4	Enhance remuneration	5 (13.51)
5	Marks are given illogically	2 (5.41)
6	Need concentration	3 (8.11)

In order to improve the camp valuation the following suggestions were made:

1. Strict administration of valuation camp is needed
2. Compulsory to all
3. Form school level discipline in the camp
4. Enhance remuneration
5. Marks are given illogically, take actions to control this
6. Provide calm environment for ensuring concentration

The following are the constraints felt by vocational higher secondary teachers in working with continuous and comprehensive evaluation at higher secondary level:

Table 88

Constraints in Continuous and Comprehensive Evaluation in VHSS

Sl. No.	Constraints in CCE	Yes
1	Difficulty in recording the details in time	16 (43.24)
2	Evaluate practical work	13 (35.13)
3	Evaluate social values	14 (37.84)
4	Inadequate time	21 (56.76)
5	Spot evaluation of group activities	16 (43.24)
6	Over loaded work	15 (40.54)
7	Teachers simply assign marks	11 (29.73)
8	High teacher pupil ratio	19 (51.35)

Data in Table 88 reveals the constraints felt by vocational higher secondary teachers in working with CCE. 43.24% of vocational higher secondary teachers faced constraints in working with CCE was due to difficulty in recording the details of evaluation in time, 35.14% perceive difficulties in the evaluation of practical work, evaluation of social values is the constraint faced by 37.84%, inadequate time for evaluation is the constraint before 56.76%, and on the spot evaluation of group activities is the constraint faced by 43.24%. Other constraints reported by the teachers include over loaded work (40.54%), unscientific way of giving marks (29.73%), and high teacher pupil ratio (51.35%).

Teacher Training

Table 89

Training Needs of Vocational Higher Secondary Teachers

Sl. No.	Items	Yes
1	Any training for managing adolescents	14 (37.84)
2	Attended in-service courses	9 (24.32)
3	Monthly in-service training is needed	3 (8.11)
4	In-service training is needed on terminal basis	6 (16.22)
5	In-service training is needed once in an year	28 (75.68)

Only 37.84% higher secondary teachers attended various training programmes to manage adolescents. 24.32% vocational higher secondary teachers attend various inservice training programmes. 75.68% teachers feel that inservice training should be given once in a year where as 16.22% teachers wish it should be once in every term. Very few 8.11% feel that inservice training should be given every month.

Inservice courses attended by vocational higher secondary teachers.

Inservice courses attended by vocational higher secondary teachers includes Management, Counselling, Career guidance, ORC, 2 days SIEMAT training, 7 days SCERT field level training for the enrichment of subject knowledge, 3 days SIEMAT training enrichment of subject, 5 days field level enrichment programme SCERT- enrichment of subject knowledge, 5 day new curriculum-VHSE department, and 3 days IMG training.

Shortcomings of inservice courses.

Shortcomings of inservice courses reported by vocational higher secondary teachers consists the following.

1. No group discussion, Training is not activity oriented only lecturing with power points is the strategy adopted for training programmes
2. No discussion of current information of subjects
3. Cluster is a repetition
4. Provide training during the starting of VHSS class, i.e., Training should be given at the beginning of the academic year not at the end.

Areas in which training needed by vocational higher secondary teachers.

1. Pharmaceuticals,
2. Curriculum and syllabus
3. Training to manage all types of learners
4. Training for faculty improvement
5. New course book first year English
6. Graphic designing
7. Emotional and social values in adolescence
8. Evaluate curriculum-syllabus, unit plan
9. Training is required in modern techniques and methods in vocational subjects
10. Training to manage Adolescent problems

Other Activities

Table 90

Other Activities in VHSS

Sl. No.	Other Activities	No of Responses
1	NCC	3 (8.11)
2	Social club	4 (10.81)
3	NSS	19 (51.35)
4	School parliament	9 (24.32)
5	Nature club	6 (16.22)
6	Language club	4 (10.81)
7	Arts club	3 (8.11)

Data in Table 90, reveals that various clubs functioned efficiently in vocational higher secondary schools. The other activities in vocational higher secondary schools are activities related to, Nature club, National Service Scheme, School parliament, Arts club, Social club, Language club, and National Cadet Corps.

School Administration

This item deals with whether the teachers satisfied with general discipline in vocational higher secondary school. 28 (78.38%) vocational higher secondary teachers are of the opinion that they satisfied with the discipline in their schools. 21.62% opine that they are not satisfied with the general discipline in their school and they suggest that there is a need to provide awareness about duties and responsibilities of each child, reduce teacher pupil ratio and give guidance to students.

Functioning of PTA in Vocational Higher Secondary Schools

Table 91

Functioning of PTA in Vocational Higher Secondary Schools

Sl. No.	Functioning of PTA in vocational higher secondary schools	Yes
1	PTA act sufficiently in school	32 (86.49)
2	It support various activities	31 (83.78)
3	Satisfied with working of PTA	28 (75.68)

As indicated by Table 91, 86.49% vocational higher secondary teachers opined that PTA act sufficiently in school. 75.68% were satisfied with functioning of PTA. 83.78% vocational teachers states that PTA support various activities of school. 13.51 percent expressed their dissatisfaction on the functioning of PTA in school, 4 teachers were not satisfied because of lack of proper involvement PTA in improving the facilities in school (lab, equipment). 2 teachers state that PTA focus only overt performance not internally motivated.

Duties Other Than Academic Work

Table 92

Duties Other Than Academic Work

Sl. No.	Duties other than academic work	No of responses
1	NSS	3
2	agricultural club	2
3	vegetable garden	2
4	Production cum training service	2
5	On the job training	2

Sl. No.	Duties other than academic work	No of responses
6	Vijayasree	2
7	Expo	1
8	Admission (Help desks)	1
9	Principal duty	1
10	Admission	1

In addition to teaching vocational higher secondary teachers performed a number of other duties like NSS in charge, coordinator- agriculture club, vegetable garden, admission On the job Training, Production cum training service, vijayasree, expo- of various clubs, principal duty etc.

Status of Vocational Higher Secondary Education

Table 93

Status of VHSE

Sl. No.	Items	Yes
1	Students selected vocational higher secondary as a last option	22 (59.46)
2	Students have misconception that higher secondary courses are superior	22 (59.46)
3	Higher secondary got more preferences than vocational higher secondary by media	28 (75.68)
4	Higher secondary got more preferences than vocational higher secondary by public	29 (78.38)
5	Higher secondary got more preferences than vocational higher secondary by parents	31 (83.78)
6	Higher secondary got more preferences than vocational higher secondary by students	27 (72.97)
7	Selection of vocational higher secondary scheme create any problems for applying Central Govt. jobs	19 (51.35)

Sl. No.	Items	Yes
8	Selection of vocational higher secondary scheme create any problems for applying state Govt. jobs	5 (13.51)
9	Selection of vocational higher secondary scheme create any problems for applying higher studies	14 (37.84)
10	Vocational courses have regional practical significance	29 (78.38)
11	Existing courses are outdated	8 (21.62)

Table 93 reveals that 59.46% of vocational higher secondary teachers opined that students select vocational higher secondary as a last option. They also agreed that students had misconception that higher secondary courses are superior. Teachers also agreed that higher secondary got more preference than vocational higher secondary by media (75.68%), public (78.38%), by parents (83.78%) and by students (72.97%). Vocational higher secondary teachers perceived there exists Conflicts in the equivalency of higher secondary and vocational higher secondary courses create problems to apply for central govt jobs (51.35%), state govt jobs (13.51%) and higher studies (37.84%).78.38% of vocational higher secondary teachers agreed that vocational courses had regional practical significance.21.62% of vocational higher secondary teachers claimed that some existing courses are outdated.

Table 94

Reasons for Selecting Vocational Higher Secondary as a Last Option

Sl. No.	Reasons for selecting vocational higher secondary as a last option	No of Responses
1	Lack of orientation about vocational course	20 (54.05)
2	Lack of media support	17 (45.95)
3	Limited chance for advanced studies	2 (5.41)
4	Lack of reservation for higher studies	8 (21.62)
5	Introduction of ASAP in higher secondary	4 (10.81)
6	Out dated courses	3 (8.11)
7	Equivalency problems with plus two courses of other states	8 (21.62)
8	PSC approval of certain courses	1 (2.7)
9	Six working days & less impression	1 (2.7)

Various answers were received from vocational higher secondary teachers regarding reasons for selecting vocational higher secondary as last option. Out of 22, 20 vocational higher secondary teachers complaint about lack of orientation about vocational courses while 17 teachers put forth the excuse that media support for enhancing prosperity is not available to vocational higher secondary. Other reasons reported by the teachers consists of limited chance for advanced studies, lack of reservation to higher studies, outdated vocational courses, equivalency problems with plus two courses of other states, non approval of certain courses by PSC and lack of impression of vocational higher secondary.

VHSE and Higher Education

Table 95

VHSE and Higher Education

Sl. No.	Items	Yes
1	Problem of equivalency and recognition of vocational course	7 (18.92)
2	Any Problems to get admission in higher studies	13 (35.14)
3	Adequate facilities for advance studies after VHS course	19 (51.35)
4	Adequate job opportunities after VHS course	28 (75.68)

Data in Table 95, reveals problems in the vocational courses. Vocational higher secondary teachers agreed that there exist problems with regard to equivalency and recognition of vocational courses (18.92%) and to get admission in higher studies (35.14%). 51.35% claimed that adequate facilities for advanced level studies were available to vocational higher secondary students. 75.68% teachers agreed that there exists adequate job opportunities to vocational higher secondary students.

Problems in Admission to Higher Studies

Problems to vocational higher secondary students for getting admission to higher studies reported by teachers consists the following.

1. Lack of second language create problems in admission to degree
2. Do not consider the mark of English
3. They cannot go to Bsc (Maths) as they are not studying Maths during their course period
4. There is disparity In mark calculation

5. Marks of vocational subject, GFC not counted for admission to degree courses
6. vocational subject scores are not considering for rank list preparation
7. lack of fourth option subject

Attraction to VHSE

Table 96

Attraction to VHSE

Sl. No.	Items	Yes
1	Any need for innovative courses	19 (51.35)
2	Introduction of ASAP negatively affect VHSE	9 (24.32)
3	Adequate co operation from industries and factories for providing training facilities	23 (62.16)
4	Availability of text books for subjects	25 (67.57)
5	Referring senior teachers text books, internet	3 (8.11)

More than 50% teachers highlighted the need for innovative courses at vocational higher secondary. School industry linkage is an important factor for the effective conduct of VHSE. 62.16% teachers opined that they got adequate co operation from industries for providing direct field experiences to vocational students. With regard to availability of text book 67.57% Vocational higher secondary teachers opined that authentic text books are available. The remaining teachers manage this constraint by referring senior teachers' text books and by using internet.

Table 97

Incentives Required for Motivating Students

Sl. No.	Incentives Required to Motivate Students	No of Responses
1	Stipend for vocational course	6 (16.22)
2	Liberal loans for self employment after VHS	11 (29.73)
3	Equivalency with plus two	15 (40.54)
4	Reservation for higher studies	25 (67.57)
5	Campus selection	24 (64.86)
6	Job security	19 (51.35)
7	Apprenticeship with stipend	21 (56.76)

Table reveals that majority of teachers opined higher studies reservation (67.57%), chances for campus selection (64.86%), job security (51.35%) and apprenticeship with stipend (56.76%) are the major incentives required to motivate students to vocational higher secondary courses.

Human Resource Empowerment

Table 98

Human Resource Empowerment to VHSS Teachers

Sl. No.	Items	Yes
1	Attended inservice training programmes for meeting the needs of VHSE	16 (43.24)
2	Enough provisions in the special rule with regard to promotion	19 (51.35)
3	VHSE teachers association effective for solving problems	13 (35.14)
4	Management of DVHSE is effective	23 (62.16)

Data in Table reveals that 43.24% teachers attended inservice training programmes for meeting the needs of Vocational Higher secondary. More than 50% teachers stated that there is enough provisions in the special rule with regard to promotion. 35.14% teachers opined that VHSE teachers association effective for solving problems. 62.16% teachers feel that DVHSE is effective in managing academic and administrative affairs of vocational higher secondary.

Table 99

Areas of Preferences for Innovative Courses

Sl. No.	Areas of Preferences for Innovative Courses	No of Responses
1	Mobile phone repair/ technology	6
2	Palliative care nursing	1
3	Journalism	1
4	Visual media	1
5	Computer based courses(it)	2
6	tourism	1
7	Commerce-marketing	1
8	Hitech farming	1
9	Fashion technology	1
10	Dental	1
11	blood banking	1
12	Paramedical courses	1

Vocational higher secondary teachers suggested introduction of innovative courses in areas like Mobile phone repair/ technology, Palliative care nursing, Journalism, Visual media, Computer based courses(it), tourism, Commerce-marketing, Hitech farming, Fashion technology, Dental, blood banking, and Paramedical courses.

Suggestions

The obtained data regarding the opinion of vocational higher secondary teachers of the sampled vocational higher secondary schools had been analysed. Though there was separately included the item as suggestions to improve vocational education the vocational higher secondary teachers made their reactions in a general manner. The responses pooled out from the government vocational higher secondary teachers and aided vocational higher secondary teachers are given below.

Suggestion of the vocational higher secondary teachers for the improvement of system.

The important suggestion given by VHSS teachers include revise the vocational syllabus regularly, provide training to meet the needs of VHSS, improve the facilities in school, improve the institute industry interaction, take steps to equalize HSS and VHSS, reduce teacher pupil ratio, introduce innovative courses, give reservation to students for higher studies in the concerned vocational subject, and marks of vocational subject, GFC should be considered for degree.

Discussion

Library facilities.

Vocational higher secondary teachers opined that dictionaries and other reference materials are adequate in school library. Majority of vocational higher secondary teachers opined that they (97.3%) encouraged students for reading. Vocational higher secondary teachers perceive problems in the utilization of library facilities and they reported that it was due to lack of well set up libraries, lack of proper time for the utilization of facility, lack

of facilities like librarian, reading facilities, books, lack of students interest, non availability of teacher in charge, and high students ratio in HSS.

Curriculum.

Result of the study indicates that a considerable number of vocational higher secondary teachers (81.08) felt that the existing syllabus was adequate. More than half of the vocational higher secondary teachers student centered teaching was not effective for their subject. Only low percentage teachers agreed that students reached after attaining minimum level of learning. Most of the teachers have adequate time for preparation, and higher secondary teachers provide remedial lessons for those who lack prerequisite. Suggestions regarding further improvement of syllabus are include latest information in the syllabus, reduce the irrelevant contents, and rearrange or order the contents according to time and consider the learners age. Constraints faced by higher secondary teachers in student centered curriculum transaction include high student ratio, lack of time, bulky syllabus, and lack of facilities in class room.

Text book.

The opinion gathered from teachers reveals that vocational higher secondary books are effective in planning class room instruction, contents in the text book was appropriate for attaining the objectives, and logically organized. It is an efficient teaching aid (65%) but which is of low quality of printing (32%). More than half of the teachers suggested the need for restructuring of existing syllabi. Vocational higher secondary teachers reported some sort of modern technologies in school and the teachers claim the utilization of these facilities for providing instructions. All the vocational

higher secondary schools studied have some sorts of teaching-aids like OHP, computer, Models, recordings, and film etc.

Laboratory facilities.

Laboratory experience should form an essential and significant part of vocational higher secondary science streams. To carry out the practical it needs a well equipped laboratory. The analysis made it clear that the availability and utilization of laboratory facilities are adequate to some extent. The analysis of the data obtained revealed that there are some shortcomings such as instruments, space, separate subject laboratories, computer system and net work error.

Attendance.

The study reveals that higher secondary students attended the classes in time and teachers entered the attendance regularly (97%). Only one teacher reported the irregularity problems among students.

Individual attention.

Teachers monitor each students daily activities and give attention to slow learners and gifted in the class by adopting various measures.

Evaluation.

Monitoring and evaluation of students' daily activities in the school premises are essential to effective teaching learning in the classroom and good management and governance of school.

Vocational higher secondary schools had regular students' performance system; teachers were actively engaged in monitoring the learners' performance by conducting unit tests (81.08%) and self evaluation (83.78%). Teachers

check home work, and provide feedback (81.08%), maintained students profile (75.68%) and counsel the learners. Cent percent stated that valuation camp during vacation doesn't create difficulties to them.

Teacher training.

Most of the teachers were not trained to manage adolescents. Only a few teachers had attended various inservice training programmes. Most of the teachers interested to improve their professional competency by attending inservice programmes once in year. Higher secondary teachers needed training to improve their existing knowledge and meet the situations in schools.

Teachers indicated that the most important factors inhibiting effective inservice courses include lack of activity oriented training, repletion of clusters, lack of latest knowledge, and lack of efficient planning with regard to time.

Other activities.

All the vocational higher secondary schools studied have some sort of club activities like, Nature club, National Service Scheme, School parliament, Arts club, Social club, Language club, and National Cadet Corps. It becomes the duty of the vocational higher secondary school to provide such services that give the opportunities to the students to reveal their inherent abilities.

School administration.

Majority of VHSS teachers satisfied with general discipline in school. The teachers who are not satisfied with general discipline in their school put forth certain suggestions such as provide awareness about duties and responsibilities to students, reduce teacher pupil ratio and give guidance to students for better discipline.

PTA.

Majority of VHSS teachers were opined that PTA act sufficiently in school and teachers were satisfied with functioning of PTA. Majority of them state that PTA supports various activities of school. Lack of involvement, proper evaluation, unawareness of academic matters, and conflicts in the decision making process are the major reasons reported by vocational higher secondary teachers in the improper functioning of PTA.

Duties other than academic work.

In addition to teaching vocational higher secondary teachers performed a number of other duties like NSS in charge, coordinator- agriculture club, vegetable garden, admission OJT, Production cum training service, vijayasree, expo- of various clubs, principal duty etc.

Status of VHSE course.

Majority of vocational higher secondary teachers opined that students select vocational higher secondary as a last option. They also agreed that students had misconception that higher secondary courses are superior. Teachers also agreed that higher secondary got more preference than vocational higher secondary by media, public, by parents, and by students. Vocational higher secondary teachers perceived there exists Conflicts in the equivalency of higher secondary and vocational higher secondary courses create problems to apply for central govt jobs (51.35%), state govt jobs (13.51%) and higher studies (37.84%). vocational higher secondary teachers agreed that vocational courses had regional practical significance. Some vocational higher secondary courses are outdated.

VHSE and higher education.

Vocational higher secondary teachers agreed that there exist problems with regard to equivalency and recognition of vocational courses (18.92%) and to get admission in higher studies (35.14%). 51.35% claimed that adequate facilities for advanced level studies were available to vocational higher secondary students. Vocational higher secondary teachers agreed that there exists adequate job opportunities to vocational higher secondary students.

Attraction to VHSE.

More than 50% teachers highlighted the need for innovative courses at vocational higher secondary. School industry linkage are an important factor for the effective conduct of VHSE.62.16% teachers opined that they got adequate co operation from industries for providing direct field experiences to vocational students. With regard to availability of text book 67.57% Vocational higher secondary teachers opined that authentic text books are available. Majority of teachers opined higher studies reservation (67.57%), chances for campus selection (64.86%), job security (51.35%) and apprenticeship with stipend (56.76%) are the major incentives required to motivate students to vocational higher secondary courses.

Human resource empowerment.

The analysis revealed that 43.24% teachers attended inservice training programmes for meeting the needs of Vocational Higher secondary. More than 50% teachers stated that there were enough provisions in the special rule with regard to promotion. 35.14% teachers opined that VHSE teachers association effective for solving problems. 62.16% teachers feel that DVHSE is effective in managing academic and administrative affairs of vocational higher secondary.

Suggestions.

Vocational higher secondary teachers suggested introduction of innovative courses in areas like Mobile phone repair/ technology, Palliative care nursing, Journalism, Visual media, Computer based courses(it), tourism, Commerce-marketing, Hitech farming, Fashion technology, Dental, blood banking, and Paramedical courses.

Part C**Response of Students of Higher Secondary Schools in Kerala**

Students are the center of an education system. They are the direct beneficiaries of the system. So while considering an education system the investigator felt that their perceptions are inevitable part of a critical study. In order to attain the third objective of the present study response of students of higher secondary on the availability and utilization of facilities for learning, evaluation and examination system, identify the reaction of students about system and to locate the problems if any in the higher secondary system were collected and analysed. The data collected through Questionnaire meant for higher secondary students were analysed and interpreted in Part E of this chapter. The analysis of the data and suggestions made by them on each dimension are as follows.

Course Selection

93.71% of higher secondary school students responded that they got admission in the desired course. 93.01% students of higher secondary schools are choosed their advanced education in their same course after the completion of plus two.

Medium of Instruction

As English is the medium of language at Higher Secondary level education and some of the admitted students completed their schooling in Malayalam as medium of instruction. This creates language problem for them to study.

Table 100

Medium of Instruction

Sl. No.	Items	Yes
1.	Difficulty in following class due to change in the medium of instruction.	251 (35.1)

From the Table 100, it was found that 35.1% higher secondary students faced difficulties in following class due to the change in the medium of instruction.

Second part of the question was meant for those who responded 'yes' to the first part of the question in the sense that they faced difficulties in following class due to language change. These higher secondary students had given the following difficulties which arise due to language problem.

Table 101

Difficulties Due to Change in Medium of Instruction

Sl. No.	Items	Yes
1	Change in the medium of instruction create problem to understand the content properly	178 (24.89)
2	Creates difficulty in writing	65 (9.09)
3	Creates difficulty in studying	61 (8.53)

Sl. No.	Items	Yes
4	Create difficulties to understand meaning	23 (3.22)
5	Difficulty to present the content	19 (2.66)
6	Lower performance in examination	6 (0.84)
7	Forgetting the content	3 (0.42)
8	Fear of Grammar	2 (0.28)
9	Face difficulties in the first year	6 (0.84)

Change in the medium of instruction created problems to understand properly, difficulty to write, difficulties to study, difficulties to understand meaning, and difficulties to present properly. It also created grammar fear and forgot contents; it leads to reduction in exam mark,

Some students reported change in the medium of instruction created difficulties in the first year.

Consult Teachers for Clarifying Doubts

Table 102

Doubt Clarification in HSS

Sl. No.	Items	Yes
1	Consult teachers for clarifying doubts after class room activities	569 (79.58)
2	Teachers clarify doubts properly	590 (82.52)

Table reveals that 79.59% of higher secondary student consulted teachers for clarifying doubts after class room activities and there is no difficulty in

conceiving the ideas. 82.52% argued that teachers clarified the doubts raised by students properly.

Opinion of Higher Secondary Students on Physical Facilities Available in School

Library facilities.

Libraries provide opportunities to learners for expansion and clarification of knowledge. Data regarding effectiveness of libraries in higher secondary schools were collected and analysed.

Table 103

Library Facilities to HSS Students

Sl. No.	Items	Yes
1	Library facilities are sufficient for higher secondary students	336 (46.99)
2	Availability of resources in the library	228 (31.89)
3	Utilisation of library facilities in free time	187 (26.15)
4	Whether teachers motivate to use library	267 (37.34)

The analysis of the obtained data on the availability of library facility revealed that 46.99% of higher secondary students expressed that school library facilities are sufficient. Only 31.89% higher secondary students agreed the availability of useful resources in the library. 26.15% students utilized library facilities in free time. 37.34% of higher secondary students opined that teachers encouraged them to use library facilities.

Table 104

Strategy Used for the Distribution of Library Books in Higher Secondary Schools

Sl. No.	Items	Yes
1	Distributed by Teachers	64 (8.95)
2	Distributed by students	41 (5.73)
3	Distributed by librarian	167 (23.36)
4	Not distributed	419 (58.6)

Data in Table 104 reveals that more than 50% of higher secondary students claimed that library books were not distributed to students. 23.36% students reported service of librarian for the distribution of books. Other methods for distribution of books include distributed by teacher in charge (8.95%) and by students (5.73%).

Table 105

Constraints in Utilization of Library Facilities to HSS Students

Sl. No.	Constraints in utilization of library facilities	No of Responses
1	Lack of time	266 (37.2)
2	Inefficient working	405 (56.64)
3	Ignorance about the functioning of the library	36 (5.03)
4	Lack of interest	2 (0.28)
5	Lack of books	3 (0.42)
6	Lack of teachers support	0

Data in Table 105 reveals that the students pointed out five reasons for improper utilization of library such as, Lack of time (37.2%), ineffective effective working(56.64%), and Lack of interest(.28%). 5.03% students opined that they do not know about working of a library in their school, and 0.42% complained that library lack adequate books. All these created difficulties in utilizing library.

Laboratory facilities in higher secondary schools.

Data regarding effectiveness of laboratory in higher secondary schools were collected and analysed.

Table 106

Laboratory Facilities in Higher Secondary Schools (N=162)

Sl. No.	Items	Yes
1	Efficient working of lab	131 (80.86)
2	Utilise the laboratory facilities during the time allotted	130 (80.25)
3	Adequate facilities in the lab	132 (81.48)
4	Service of lab assistants while doing lab works	139 (85.8)
5	Teachers give proper instruction for doing practical	156 (96.29)
6	Satisfied with present functioning of lab	103 (63.58)

Of the total higher secondary school students sampled 80.86% agree that lab was working efficiently in their school.80.25% higher secondary students opined that they utilised laboratory facilities in allotted time. 81.48% students agreed that there were sufficient facilities in the laboratory. 85.8% students were opined that they got the service of laboratory assistant for doing

practicals.96.29% agreed that teachers gave clear instruction for doing practicals. Of the total higher secondary school students sampled, 63.58% responded that they were satisfied with the functioning of lab.

Laboratory utilization in allotted time.

When the students were asked about the reasons for lack of proper utilisation of lab in time, following answers were reported.

Table 107

Difficulties in Utilizing Lab Facilities in Allotted Time

Sl. No.	Difficulties in Utilizing Lab Facilities in Allotted Time	No of Responses
1	Laboratory periods used for theory classes	16
2	Teachers absence	11
3	Negative Attitude of teachers	4
4	Lack of instruments and facilities	2

From the information presented in Table reveals the difficulties in utilizing laboratory facilities in allotted time consists the following. Lack of adequate instruments and facilities, Laboratory practical periods used for theory classes, absents of teachers, and teachers negative attitude.

Table 108

Reasons for Dissatisfaction in the Functioning of Laboratory

Sl. No.	Reasons for Dissatisfaction in the Functioning of Lab	No of Responses
1	Important equipments-lack working capacity	7 (4.32)
2	Lack of adequate apparatus	20 (12.35)
3	Space/seating, facilities	21 (12.96)

Sl. No.	Reasons for Dissatisfaction in the Functioning of Lab	No of Responses
4	Lack of Ventilation	7 (4.32)
5	Teachers negative attitude	3 (1.85)
6	More students at a time	11 (6.79)
7	Lack of neatness/Leaking building	4 (2.47)
8	Lack of first aid	3 (1.85)
9	Lack of time for doing practical	5 (3.09)
10	Teachers absent	3 (1.85)

The presented data in Table indicates the reasons for improper functioning of laboratory reported by teachers are important equipments-lack working capacity, Lack of adequate apparatus, space/seating facilities, Lack of Ventilation, Teachers negative attitude, More students at a time, Lack of neatness/Leaking building, Lack of first aid, Lack of time for doing practical, and teachers absent.

Computer laboratory

The analysis for the availability of computer lab 40.83% of the students of the higher secondary schools have responded positively regarding the availability of computer lab in their school.

Table 109

Availability and Use of Computer Lab in Higher Secondary (N=264)

Sl. No.	Items	Yes
1	Availability of computer lab	246 (93.18)
2	Sufficient facilities in the lab	185 (70.07)
3	Internet facility	178 (67.42)
4	Service of computer instructor	179 (67.80)
5	Time is allotted to use lab	199 (75.37)
6	Use the lab during the allotted time	184 (69.69)

Table 109 reveals that 70.07% of higher secondary students said that sufficient facilities are there in the lab. 67.42% students states that internet facilities are available in the computer lab. Only 67.8% agreed the service of an instructor in the lab. 75.38% of higher secondary students opined that time is allotted in the time table for utilizing lab facilities. 69.69% agreed that they used the lab during the allotted time.

The major reasons for the computer practical reported by students include the following.

1. Lack of instructor in the lab
2. Lack of adequate computer
3. Lack of time to use laboratory
4. Lack practical periods
5. Lack working computer
6. More than one student use one system at a time
7. Electricity problem

Physical education.

Data regarding the service of physical education to higher secondary students had been analysed. The data obtained were consolidated and presented in Table.

Table 110

Physical Education Training to HSS Students

Sl. No.	Items	Yes
1	Availability of service of the physical education teacher	223 (31.19)
2	Participation in sports	213 (29.93)
3	Participation in athletic meets	144 (20.14)
4	Participate in games	88 (12.31)
5	Proper training available in school for the participation	102 (47.89)
6	Teachers encouraged to participate in sports	424 (59.3)
7	Time allotted for physical training as per time table	145 (20.28)

As per the informations from Table 110 it is clear that, 31.19% higher secondary students stated the availability of service of the physical education teacher for physical training. 29.93% higher secondary students participated in sports competition. Among them 20.14 participated in athletic meets where as 12.31% participated in games. 59.3% higher secondary students opined that teachers encouraged for participating in sports. Only 20.28% agreed the availability of time to physical training as per time table.

In the higher secondary schools periods are allotted in the school time table but these periods are not used for physical education training. These periods are mainly used for teaching and learning activities.

Toilet facilities in higher secondary schools.

Teaching learning process in the schools is closely linked with sanitation, health and school environment. Poor hygiene, poor quality of drinking water and lack of sanitation facilities cause various diseases each year (Quality council of India). The obtained data regarding availability of toilet facilities in higher secondary schools had been analysed.

Table 111

Toilet Facilities to Higher Secondary Students

Sl. No.	Items	Yes
1	Availability of sufficient toilet facility	450 (62.94)

Data in Table 111 reveals that 62.94% higher secondary students agreed that sufficient toilet facilities were available in their school.

Data regarding shortcomings or inadequacies of toilet facilities reported by higher secondary students are the following.

Table 112

Shortcomings or Inadequacies of Toilets in HSS

Sl. No.	Defects of Toilets	No of Responses
1	Lack water	358 (50.07)
2	Lack neatness	270 (37.76)
3	Lack door	121 (16.92)
4	Lack sufficient number	79 (11.05)
5	Damaged	25 (3.49)
6	Students clean	19 (92.66)

Sl. No.	Defects of Toilets	No of Responses
7	Lack wash basin	1 (0.14)
8	Lack of napkin destroyer	1 (0.14)
9	Due to lack of interval time it is difficult to use distant bathroom	11 (1.54)

The major defects of toilet facilities in higher secondary schools reported by students are the following. Lack water in the toilet, Lack neatness, Lack door, Lack sufficient number of toilets, Damaged toilets, Students clean, Lack wash basin, Lack of napkin destroyer, Less interval time and it is difficult to utilise distant bathroom.

Evaluation.

Evaluation is a decision-making process that intends to lead students towards better performance and consequently helps to bring about qualitative improvement in education (Quality council of India). Monitoring and evaluation of students' daily activities in the school premises are essential to effective teaching learning process. The obtained data regarding evaluation practices in higher secondary schools had been analysed. The result of the analysis presented in Table 113.

Table 113

Evaluation in HSS

Sl. No.	Items	Yes
1	Unit tests are conducted at the end of each unit for all subjects	226 (31.61)
2	Unit tests are conducted at the end of each unit for some subjects	400 (55.94)
3	Unit tests are never conducted at the end of each unit	83 (11.61)
4	Evaluated answer scripts given back in time	551 (77.06)
5	More exams are required to assess academic excellence	502 (70.21)
6	Present evaluation system is effective	429 (60)

Table 113 shows that 31.61% higher secondary students agreed that unit tests conducted at the end of each unit. 77.06% higher secondary students agreed that they got valued answer scripts given back in time. 70.21% higher secondary student suggested that more exams were required to evaluate academic excellence. 60% higher secondary students agreed that present evaluation system was efficient.

The following Table 114 gives the details of problems in evaluation system in higher secondary schools.

Table 114

Problems in Evaluation System

Sl. No.	Problems in Evaluation System	No of Responses
1	Teacher shows Favoritism/ partiality in evaluation	160 (22.38)
2	Practical exams conducted improperly	130 (18.18)
3	Teachers scores without proper scoring indicators	80 (11.19)
4	Lack of proper valuation of assignment and seminars	93 (13.01)
5	Focus only some students in the class	3 (0.42)
6	Unnecessary threatening	2 (0.28)
7	Exploiting individuality	1 (0.139)
8	Unnecessary reduction -lack of interest	1 (0.14)

The major problems in evaluation reported by higher secondary students are Favoritism or partiality of teachers, practical exams conducted improperly, teachers give marks without illogically, lack of proper valuation of assignment and seminars, lack of individual attention and focus only some students in the class, unnecessary threatening, exploiting individuality, and unnecessary reduction of marks in the exams reduce interest.

Learning Activities

Availability of teachers for teaching and guidance.

The following Table gives data regarding the availability of teachers for teaching and guidance.

Table 115

Availability of Teachers for Teaching and Guidance

Sl. No.	Items	Yes
1	Sufficient teachers available for all the subjects	652 (91.19)
2	Teachers give guidance in Curricular matters	615 (86.01)
3	Teachers give guidance in co curricular matters	268 (37.48)
4	Teachers give guidance in social matters	8 (1.11)
5	Teachers give guidance in discipline matters	6 (0.83)
6	Teachers give guidance in sports matters	5 (0.69)

From the Table 115, it was found that 91.19% higher secondary students reported the availability of teachers for handling all subjects. Higher secondary teachers give guidance to students on areas like curricular, co curricular, social, discipline, and sports matters.

Method of teaching adopted by higher secondary teachers.

Method of teaching adopted by higher secondary teachers reported by higher secondary students presented in the Table 116.

Table 116

Method of Teaching Adopted by HSS Teachers

Sl. No.	Method of Teaching	No of Responses
1	Lecture method	414 (57.9)
2	Lecture demonstration method	210 (29.37)
3	Notes dictation	639 (89.37)
4	Group discussion	228 (31.89)
5	Field visits	56 (7.83)

A look at the percentage analysis of data clearly shows that 89.37% higher secondary students stated that dictation of notes is the method adopted by majority of teachers. The other methods like lecture method, discussion method afield visits etc is also practiced by teachers in higher secondary schools.

Learning activities or class room activities.

Table 117

Nature of Learning Activities Adopted in Higher Secondary Class

Sl. No.	Learning Activities	No of Responses
1	Discussions	500 (69.93)
2	Seminars	527 (73.71)
3	Quiz competitions	54 (7.55)
4	Assignments	562 (78.60)

Sl. No.	Learning Activities	No of Responses
5	Debates	369 (51.61)
6	Self study	6 (0.84)
7	Note writing	5 (0.69)
8	Project	1 (0.14)

Table 117, provides the information about the nature of classroom activities in higher secondary schools. The major learning activities taken place in higher secondary schools include assignments (78.60), Seminar (73.71), Discussions (69.93), and Debate (51.61).

Audio visual aids.

Audio visual aids used by teachers for transacting curriculum presented in the Table 118.

Table 118

Audio Visual Aids Used by Teachers in Higher Secondary Classes

Sl. No.	Audio Visual Aids	No of Responses
	Teachers give instructions by using audio visual aids	401 (56.08)
1	Computer	249 (34.83)
2	OHP (Over Head Projectors)	306 (42.8)
3	Audio visual aids TV	28 (3.92)
4	Models	43 (6.01)

From the Table 118, it was found that 56.08% of higher secondary students agreed that teachers were used different audio visual aids to take class. 42.79% higher secondary students opined that projectors were used while teaching certain subjects. The other teaching aids used by teachers include Computer (34.83) Models (6.01) and TV (3.92).

Teacher pupil relationship.

Data regarding teacher pupil relationship in higher secondary schools presented in the Table 119.

Table 119

Teacher Pupil Relationship in Higher Secondary Schools

Sl. No.	Teacher –pupil relation ship	Yes
1	Friendly relationship existing among teachers and students	522 (73.01)
2	Teachers efficiently supervise learning activities	588 (82.24)
3	Teachers giving timely guidance to simplify learning process	558 (78.04)

Table shows 73.01% of higher secondary students agree that good teacher pupil relation existed in their school.82.24% of students states that teachers efficiently supervise learning activities. 78.04% students agree that teachers give timely guidance to simplify learning process.

Counselling and Training Programme

Table 120

Counselor's Service in HSS

Sl. No.	Items	Yes
1	Service of counselor in higher secondary	297 (41.54)
2	Service of counselor available in : learning aspects	257 (35.94)
3	Service of counselor available in :Personal aspects	239 (33.43)
4	Service of counselor available in :Vocational aspects	47 (6.57)
5	Service of counselor available in :Adolescent issues	0

Table indicates that 41.54% higher secondary students stated the availability of service of counselor in higher secondary school for solving various issues.35.94% opined that they got the service of counselor for solving difficulties in area related to learning. 33.43% approach counselor for solving personal problems and 6.57% approach counselor for solving vocational issues.

Data regarding organisation and utilization of various training programme to HSS students presented in the Table 121.

Table 121

Organisation and Utilization of Various Training Programmes to HSS Students

Sl. No.	Items	Yes
1	Organise training programmes to get knowledge about procuring of job	304 (42.52)
2	Attend programmes organized in school	242 (33.85)
3	Whether such programmes are efficient	225 (31.47)

Table 121 reveals that 42.52% higher secondary students opined that various career guidance training programmes were organized in their school to get knowledge about procuring of job. 33.85% students were participated in such programmes. 31.47% agreed that attended programmes are benefited to them.

Participation in Club Activities

Participation of higher secondary students in various clubs are presented in the Table 122.

Table 122

HSS Students Membership in Various Clubs

Sl. No.	Items	No of Responses
1	NSS	74 (10.35)
2	Sohrida club	142 (19.86)
3	Language club	34 (4.76)
4	Maths club	7 (0.98)
5	Social science club	60 (8.39)
6	Thanal koottu	26 (3.64)
7	Sports	3 (0.42)
8	HR club	22 (3.08)
9	ASAP	44 (6.15)
10	Nature club	6 (0.84)
11	Harithasena	4 (0.56)

Sl. No.	Items	No of Responses
12	CGAC	1 (0.14)
13	Politics/Parliamentary	9 (1.260)
14	Sahitya club	7 (0.98)
15	Literacy	6 (0.84)
16	Empathy club	10 (1.4)
17	Tourist	2 (0.28)
18	IT	1 (0.14)
19	Agriculture	2 (0.28)
20	Bhoomithra sena	1 (0.14)
21	Students protection cell	2 (0.28)

Table 122 shows that the membership of students in various clubs. It was found that 19.86% higher secondary students took permission in Souhrida club. 10.35% students took membership in NSS

Text Book

With a view to know true position of text book it was enquired from students about the language used, illustrations, arrangement etc. The information in this regard is as under

Table 123

Text Book

Sl. No.	Items	Yes
1	Simple language used	264 (36.92)
2	Sufficient no of illustration	322 (45.03)
3	Properly arranged contents	325 (45.45)
4	Use only the book suggested by the teachers	488 (68.25)
5	Find and use Authentic books	226 (31.61)
6	Selects suitable books from the library	79 (11.05)

Data presented in Table 36.92% higher secondary students were opined that language used in the text book was simple. 45.03% argued that sufficient number of illustrations was given in the text book. 45.45% opined that in text books contents were arranged properly. 68.25% higher secondary students opined that they used the books which were suggested by teachers. 31.61% refer authentic books and 11.05% select suitable books from the library.

Changes of Working Hours in Higher Secondary

Data regarding effectiveness of new time schedule in higher secondary schools were analysed and presented in the Table 124.

Table 124

Changes in the Working Hours of Higher Secondary School

Sl. No.	Items	Yes
1	Whether the new time schedule is effective	203 (28.39)

Only 28.39% higher secondary students favored the new time schedule in HSS.

Following are the difficulties pointed out by higher secondary students due to new time schedule for higher secondary schools:

Table 125

Difficulties Due to New Time Schedule

Sl. No.	Difficulties Due to New Time Schedule	No of Responses
1	Continuous class boring/ fed up	396 (55.38)
2	Low time to satisfy primary needs	330 (46.15)
3	Travelling problems	354 (49.51)
4	Insufficient lunch time	11 (1.54)
5	Mental& physical strain	17 (2.37)
6	Reduce concentration	2 (0.28)
7	Scared of wild animals due to late dispersal of classes	6 (0.84)
8	Relaxation time reduced	8 (1.12)
9	Friendship	2 (0.28)

Students reported various difficulties in the new time schedule such as fed up due to continuous class (55%). 46.15% argued that as per new time schedule time to satisfy primary needs are lacking, time 9 AM to 4.45 PM is not scientific and it create travelling problems (50%), lack interval and noon time (2%), mental and physical strain to students (2%), Unable to concentrate in the last period(.3%) not get relaxation time (1%), our school is situated in forest area, and serious problems are faced due to wild animals(.8%).

Utilisation of Saturday since it is made a holiday for higher secondary.

Table 126 shows the utilization of Saturday by higher secondary students.

Table 126

Utilisation of Saturday

Sl. No.	Utilisation of Saturday	No of Responses
1	Entrance	117 (16.36)
2	Ordering the Whole Week Activities	286 (40)
3	Tution	212 (29.65)
4	Doing work	125 (17.480)
5	ASAP Training	44 (6.15)
6	Spending in library	53 (7.41)
7	Other job oriented training	2 (0.28)
8	Cricket camp	4 (0.56)
9	Tv viewing	13 (1.82)
10	Relaxation	36 (5.03)
11	NSS	5 (0.7)
12	Other physical training	6 (0.84)
13	Note/ home work	2 (0.28)

From the Table 126 it was found that 40% higher secondary teachers utilized Saturday for ordering the whole week activities, 30% utilized for attending tuition, 17.48% utilized for doing job, and 16% utilized for entrance coaching.

Additional Skill Acquisition Programme

Table shows the benefits of ASAP course, difficulties faced by ASAP members.

Table 127

Functioning of ASAP in Higher Secondary

Sl. No.	ASAP in Higher Secondary	Yes
1	Do you have member ship in ASAP	44 (6.150)
2	Do you think ASAP course facilitate attainment of concerned skill	40 (5.59)
3	Member ship in ASAP create learning burden	17 (2.38)
4	The concerned professional skills achieved efficiently through ASAP course	35 (4.89)

Table shows that 6.15% (44) students had membership in ASAP. 40 students agreed that skills can be developed through ASAP course. 17 students opined that participating in ASAP burdened studies. 35 students agreed that the professional skills envisaged by ASAP effectively achieved through ASAP course.

Following are the defects of ASAP course noticed by higher secondary students.

1. No efficient trainers
2. Difficult to study and manage ASAP course

3. Provide skill course-academic course, which is benefited in higher study
4. It affect my study, holidays for training
5. Selected course and ASAP skill courses are different

The main defects reported by the ASAP participants include lack of efficient trainers, difficult to study and attend the course at a time, and they suggest to provide courses which are benefited to them in higher studies.

Problems/Suggestions

Suggestion of the HSS students for the improvement of system.

Suggestions and feedback from HSS humanities students.

According to HSS humanities students the important issues are

Anxiety about future. Lack of higher studies option & employment, restrict IAS, LLB to humanities.

Administrative issues like- Avoid grace mark, stop IED students pass system and scholarship, late admission affect classes, lack of availability of text book in time, New time schedule create various problems- interval time - not sufficient, continuous holiday affect class, Provide 1 hour for IT, No importance to arts and sports, introduce NCC, JRC, SPC, ASAP course-not available, dumping of IED students to humanities, More than 1 hour for 1 subject daily is a problem, Conduct unit test, sports team selection was done from some school only, stop the use of mobile, control drug use, more contents in the syllabus, and provide vocational training introduce club activities in unaided schools, unaided teachers lack training, collect regular feedback from students about the functioning of course.

Co-curricular issues include lack of encouragement of arts programmes.

Text book issues like - History text book tough and no specific order for contents in plus two history text book.

Issues related to discriminations such as - Stop comparison with science, exempted science students from cleaning, Lack of friendly atmosphere compared to high school.

Issues related to facilities. No calm environment as in city, PT teacher give importance to athletics only, Lack of adequate toilets, No proper class room, Improve infrastructure- shelf, lack of ground, in second language classes faced problems due to lack of seating arrangements, Leaky roof, lack of library, No adequate water supply in school, Need counselor, No arrangements for waste disposal.

Teacher related problems. Unnecessary explanation – history boring so change teaching style, faced various physical and mental strains from teachers, Teachers from other districts cause cultural problems, lack of friendly atmosphere, Lack of experienced teachers, unnecessary threatening, Personal harassment, Teachers must be student centered. Provide training to teachers in English. Give importance to understanding concepts, change the negative attitude of teachers.

Suggestions of HSS science students.

According to science students the major difficulties and suggestions are related with teacher, new time schedule, facilities, administration, guidance, learning, medium of instruction, curriculum, text book, mental strain, and antisocial activities.

Issues related with teacher. Fear of chemistry teacher, Change the wrong attitude of teachers, Heavy punishments, Incomplete portions, No sincere classes, change teachers attitude (responsibility) provide motivation & training to teachers, lack of proper notes, spent time for unwanted talks by some teachers, Teacher use wrong words, appoint committee for evaluating teachers & take action, control politics of teachers/principal, unnecessary special classes, teachers give important topics as seminar, so it is difficult to understand, some teachers lack sincerity which hinder completion of portions,

Issues related with the new time schedule. New time schedule change, insufficient interval time, Transportation problem, Continuous leave of principal (Zoology teacher)-miss zoology class, lab works are pending, no model teachers, fashionable, Lack of adequate lunch time and interval time, continuous periods for same subject,

Issues related with facilities. Improve the condition of lab, No sick room, improve the condition of class room, lack of library facility, big library but not utilized, Lack of proper water supply, Lack toilet facility and it creates various diseases, No drinking water, Provide 1 hour for IT, No adequate infrastructure, Lack of physical training affect health, so provide one hour, Fear of teachers to clear doubts, new building, plumbing, wiring works not completed, library big but not used till today, second languages such as hindi, sanskrit, not in our school so provide these, lack of play ground, require a school canteen,

Issues related with administration. Avoid grace mark, Non availability of practical, implement hourly basis timetable, order of subjects in time table is improper so re arrange the time table. No proper time table, stop the delay in plus one admission, Lack of lady teachers for supervising sports and

games. Delayed admission causes lack of time and it create problems in public exam, Lack of friendly atmosphere as compared to high school, , lack of motivation to arts/sports, Conduct PTA regularly, Lack assembly, Collecting huge amount for arts/sports, need more club activities, co education is needed, Partiality in selecting to NSS, lack school assembly, transfer of teachers create incomplete portions, introduce NSS/Thanalkoottu, free entrance coaching to poor students, stop the mobile use of teachers, ensure good teacher pupil relation, lack of ASAP course, lack of efficient working of clubs, appoint cleaning staff, science fair not conducted efficiently, lack motivation for arts and sports,

Issues related with guidance. No guidance about higher studies given.

Issues related with learning. More record work, CBSE students score high mark in English without spending effort and time, forced to depend on tuition, science students need to spent more time for subject study due to English medium, it create problems & loss of time it also affect entrance result back,

Issues related with Medium of instruction. Change the teaching & learning of English at LP, UP HS section then only English shall be easier at higher secondary.

Issues related with evaluation. Conduct unit tests regularly, strict valuation is needed, English valuation tough and we got less mark, no question paper discussion,

Issues related with curriculum. More contents to study, use AV aids.

Issues related with text book. HSS follows NCERT text book- it lack simplicity- language problem, change class to NCERT base, reduce contents

in text, arrange contents & avoid unnecessary descriptions, reduce weight of book, lack of availability of text book in time, Distribute text book in time, simplify text books.

Issues related with mental strain. More home work/tuition & school-stress, record work create problem.

Issues related with Control of anti social activities. Take action against drug use, control anti social- drug distribution, give guidance to students-effect of drugs, use of mobile phone etc.

Suggestions and feedback from HSS commerce students.

According to HSS commerce students the important issues are

Related with new time schedule. In new time schedule there is continuous classes leads to tiredness, More than 1 hour for 1 subject –problem, Early starting of class compel to take hotel food, Late arrival & punishment (out of class-1 period) early starting without consider reasons –reorganise time, it create mental strain, We face transportation problems to reach school early, Lack of free time for clearing doubts, difficulty to study accountancy /economics.

Related with Co-curricular activities. Lack of motivation for arts & sports.

Related with Administration. ASAP course is not available, consider students opinion-functioning, lack of friendly atmosphere/in HSS as compared to high school, Continuous transfer & change of teachers affect our learning, provide grace mark to thanal koottu, give English orientation class, avoid special classes on Saturdays it affect our study, introduce screening in the class, Stop the cleaning of toilets by students, conduct various programmes to exhibit skills, Create awareness about importance of plus two, Control the

anti social activities and other drug uses, Introduce job oriented courses, Introduce NCC, SPC, JRC, Different admission fee charged (aided schools), there is discrimination in the selection process of students in NSS, give career class.

Related with evaluation. Conduct unit tests regularly.

Teaching and teacher related issues. Saturday special classes & it create learning burden, Change the wrong attitude of teachers, Some classes were not understand, teachers lack knowledge in language, change the teaching learning style, teachers must be student friendly, use AV aids for teaching, teachers are not punctual, no sincere classes, Teacher use wrong words and change their behavior & give training, Introduce dress code to teachers, Teachers favourism create problem, speedy classes, economics tough to study.

Related with facilities. Improve the overall facilities- class room, Improve the condition of computer lab & computer, no PT teacher, No counselor, lack of adequate toilet facility leads to various diseases, provide library facility, improve the condition of roof, need canteen facility, improve infrastructure, lack of water in bath room, lack of store.

Related to text book. Delayed distribution of text books, Introduce text book in Malayalam, Reduce contents in text

Related to Individual attention. Lack individual attention, no proper student teacher relations.

Discussion

Course selection.

Majority of higher secondary school students got admission in the interested course. And they wanted to take higher education in their respective course after the completing plus two.

Medium of instruction.

Some (35.1%) higher secondary students faced difficulties in following class due to the change in the medium of instruction. Change in the medium of instruction affected in proper understanding, writing, studying contents, understanding meaning, and proper presentation of contents. Some students reported change in the medium of instruction created difficulties in the first year only. Higher secondary students consulted teachers for clarifying their doubts and teachers clearly gave instruction to them.

Physical facilities

Library facilities.

The analysis of the data obtained on the availability of library facility reveals that more than fifty percentages of higher secondary students reported the lacking of adequate facility and resources in the library. The utilization of library facility is also not satisfactory. No proper library book distribution system is functioned in higher secondary. The major reason for the proper library utilization is due to the inefficient working of library.

Laboratory facilities.

The analysis of the obtained data regarding the availability and utilization of laboratory facilities in higher secondary schools reveals that both the availability and utility of this is adequate. The difficulties in the utilization of facility include inadequacy of instruments and facilities, non availability of practical period, and teacher related issues.

Computer laboratory.

The availability of computer lab facility in terms of rooms in HSS is inadequate. The facilities in the existing computer labs are adequate with

Internet facility. The major difficulties for the utilization of computer practical reported by students are lack of instructor, adequate no of computer, time, working computer, and electricity problems.

Physical education.

Physical education teacher's service is not available to higher secondary students and no specific time in the time table for physical education in most of the schools.

Toilet facilities.

The analysis of students' data reveals that toilet facilities were adequate in higher secondary schools and they reported some shortcomings in toilet facilities such as inadequate in number, lack of water, dirty or lack of neatness, poorly fixed or no door, etc.

Evaluation.

Students responded that, Unit tests are conducted regularly in some subjects but not for all subjects. Students put forth the major reasons for inefficiency of present evaluation system include favoritism or partiality by teachers, improper conduct of practical exams, norms of evaluation, improper valuation of assignment, seminar etc. HSS students reported the availability of teachers for all subjects. Higher secondary teachers give guidance to students on curricular, co curricular, social, discipline, and sports matters. Teacher centered or teacher directed activities (note giving 89.37%) predominates in class room instruction.

Learning activities.

The analysis of the data obtained for the availability of teachers for all subjects reveals that the availability of teaching staff is sufficient in higher

secondary schools and teachers give guidance to students on curricular, co curricular, social, discipline, and sports matters. The result reveals that dictating notes is the method adopted by majority of teachers. The other methods like lecture method, discussion method, field visits etc are also practiced by teachers in higher secondary schools. The major class room-learning activities taken place in higher secondary schools include assignments (78.60), Seminar (73.71), Discussions (69.93), and Debate (51.61). Some sort of audio visual aids were used by the higher secondary teachers such as OHP, computer, models and TV. There exists good teacher pupil relationship in higher secondary schools.

Counselling and training programmes.

Counselling programmes.

Most of the higher secondary teachers gave timely guidance to simplify learning process. Counselor's services are availed by students from the schools having a counselor, for solving various issues like issues related to - learning, personal matters, vocational matters, and adolescent problems.

Organisation and utilization of various training programmes.

School is a place where students with different abilities and talents are assembled. It is the duty of the school to provide various programmes that give the opportunities to the students to reveal their inherent abilities and talents. Various training programmes were organized by the school to get knowledge about procuring of job. Majority of them opined that these programmes were benefited to them.

Membership in club activities.

It is the responsibility of every educational institution to provide such education that leads to the overall personality development of each and every student. Such kind of education includes both the academic activities as well as co-curricular activities. These higher secondary schools were found performing well in NSS, Souhrida club, Language club, Maths club, Social science club, Thanal koottu, Sports club, HR club, ASAP, Nature club, Harithasena, CGAC, Politics/ Parliamentary, Sahitya club, Literacy, Empathy club, Tourist, IT, Agriculture, Bhoomithra sena, and Students protection cell.

Text book.

As far the different items in the text book concerned both teachers and students agree with regard to simplicity of language used in the text book, lack of logical ordering of contents, and lack of appropriate illustrations in the text book. Higher secondary students opined that they select books which were suggested by teachers.

Change in the working hours of HSS.

Only a few higher secondary students favored the new time schedule. Students reported various difficulties in the new time schedule such as fed up due to continuous class, lack of time to satisfy primary needs, time 9 AM to 4.45 PM is not scientific and it create travelling problem, lack interval and noon time, create mental and physical strain, Unable to concentrate in the last period, lack of relaxation time, our school is situated in forest area, and serious problems are faced due to wild animals. Majority of students utilized Saturday for ordering the whole week activities.

Functioning of ASAP in higher secondary schools.

As per (Govt. Letter No. 3083/C1/2013/H. Edn dated 16.02.2013) Government of Kerala has initiated an ambitious programme, the Additional Skill Acquisition Programme (ASAP) with the objective of tackling the issue of growing unemployment in the State. Students agreed that ASAP course facilitated attainment of professional skills. Following are the defects of ASAP course noticed by higher secondary students. The main defects reported by the ASAP participants include lack of efficient trainers, difficult to study and attend the course at a time, and they suggest to provide courses which are benefited to them in higher studies.

Analysis of the Data Collected from Vocational Higher Secondary Students

Students are the center of an education system. They are the direct beneficiaries of the system. So while considering an education system the investigator felt that their perceptions are inevitable part of a critical study. In order to attain the objective No 3 of the present study reaction of students of vocational higher secondary on the availability and utilization of facilities for learning, evaluation and examination system, identify the reaction of students about system and to locate the problems if any in the higher secondary system were collected and analysed.

Course Selection

Majority student (75.86%) of the vocational higher secondary schools responded that they got admission in the interested course. 89.12% students of vocational higher secondary schools wanted to take higher education in the same option after the completing plus two.

Course selection and future intention of vocational higher secondary students.

Table 128

Course Selection and Future Intention of Vocational Higher Secondary Students

Sl. No.	Items	Yes
1	Whether vocational higher secondary education helps to attain the vocational aim of life	356 (94.43)
2	More chances to higher studies	337 (89.39)
3	Like to join in the trained skill sector after completing vocational higher secondary	315 (83.55)

Data in Table 128 reveals that almost all vocational higher secondary students (94.43%) opined that vocational higher secondary education helps to attain job oriented knowledge. Of the selected students majority of them (89.39) believed that there were more chances to higher studies in the selected area.

Most of the students (83.55) like to join in the trained skill sector after completing vocational higher secondary.

Table 129

Reasons for the Choice of Vocational Course

Sl. No.	Reasons for the Choice Vocational Course	No of Responses
1	Course were useful and benefited	272 (72.15)
2	This course is useful to get a job	233 (61.8)

Sl. No.	Reasons for the Choice Vocational Course	No of Responses
3	Admission in nearby school	45 (11.94)
4	Admission for higher secondary was not possible	38 (10.08)
5	Advice from parents	20 (5.31)
6	Interested course	4 (1.06)
7	Like field work	2 (.5)
8	vhss helps to become a good person than HSS	1 (.27)
9	vocational subject & science at a time	1 (.27)
10	Up to SSLC studied in THS	1 (.27)

With a view to studying as to how to choose a particular course at vocational higher secondary the investigator include an item in the questionnaire. To the question regarding why they preferred the vocational higher secondary course five types of answers have been given by the student respondents. 72.15% students joined the vocational higher secondary because they believed that the vocational courses more benefited to them. 10.08% students joined because they do not have admission in higher secondary. 11.94% students joined because they got admission in nearby school or near the residence. 5.31% students reported that they joined because it was suggested and compelled to them by parents. 61.8% students joined because they believe that they would get job after completion of course.

Future intentions of vocational higher secondary students are presented in the Table 130.

Table 130

Future Intentions of Vocational Higher Secondary Students

Sl. No.	Future intention of Vocational Higher Secondary Students	No of Responses
1	Continue Higher studies in the selected vocational area	232 (61.54)
2	Enter the job market and attain job in the selected skill area	100 (26.53)
3	Admission in other degree course	71 (18.83)
4	Entrance	4 (1.06)
5	Not yet decided	3 (.79)
6	Parents compelled to stop study	1 (.27)
7	Other Para medical courses	2 (.53)
8	Army	1 (.27)
9	Science B Ed	1 (.27)
10	Marine engineering	1 (.27)
11	Study in ZIACinstitute	1 (.27)
12	PSC	1 (.27)
13	Film institute join	1 (.27)

Table 130 depict that 61.54 % of students reported that they intended to seek admission for higher studies in the selected vocational area itself. 26.53%

students reported to join jobs in the selected skill sector area. 18.83% students reported that they intended to seek admission in any other degree courses..79% students reported that they had not yet decided. The other intentions of students are joining in other paramedical courses, to go for B Ed programme, enter the field of marine engineering, joining ZIAC institute, preparing for government jobs, and joining film institute.

Due to the following reasons vocational higher secondary students not interested to join in the vocational trade which is selected at higher secondary level of education.

1. They reported that adequate vocational training was not received for the trade
2. They are not interested the particular field.
3. The course was of no use today
4. Lack of employment opportunity in the vocational area
5. Lack of social acceptability of the course
6. Interested to other field of study or area

Medium of Instruction

All the students admitted to vocational higher secondary have to study in English medium even though some of them complete their schooling in Malayalam as medium of instruction. This creates language problem for them to study.

Table 131

Medium of Instruction in VHSS

Sl. No.	Items	No of Responses
1.	Difficulty in following class due to change in the medium of instruction.	207 (54.91)

From the Table 131 it was found that 54.91% vocational higher secondary students were of the opinion that they faced difficulties in following class due to the change in the medium of instruction.

Second part of the question was meant for those who responded ‘yes’ to the first part of the question in the sense that they face difficulty in following class due to language change. These vocational higher secondary students were asked to give difficulties which arise due to language problem and are presented in the Table 132.

Table 132

Difficulties Due to Change in Medium of Instruction

Sl. No.	Items	No of Responses
1	Face difficult to understand	150 (39.79)
2	Face difficult to write	78 (20.69)
3	Face difficulty to study	109 (28.91)

Table 132 shows that change in the medium of instruction created problems to understand properly, difficulty to write, and difficulties to study.

Consult Teachers for Clarifying Doubts

Table 133

Doubt Clarification by Vocational Higher Secondary Students

Sl. No.	Items	Yes
1	Consult teachers for clarifying doubts	320 (84.88)
2	Teachers clarify doubts	323 (85.68)

Table 133 reveals that 84.88% of vocational higher secondary student consult teachers for clarifying doubts and 85.68% argued that teachers clarify the doubts raised by students.

Opinion of Vocational Higher Secondary Students on Physical Facilities Available in School

Library facilities.

Data regarding effectiveness of libraries in vocational higher secondary schools were collected and analysed in Table 134.

Table 134

VHSS Library Facilities

Sl. No.	Items	Yes
1	Library facilities are sufficient	112 (29.71)
2	Availability of resources in the library	75 (19.89)
3	Utilisation of library facilities in free time	77 (20.42)
4	Whether teachers encouraged to Utilise library	111 29.44

The analysis of the obtained data on the availability of library facility revealed that 29.71% of vocational students expressed that their school are well equipped with library facilities. 19.89% students stated the availability of resources in the library. 20.42% students utilized library facilities in free time and 29.44% students agreed that teachers motivated them to utilise the library facility.

Table 135

Method Used for Distribution of Library Books in Vocational Higher Secondary Schools

Sl. No.	Items	Vocational Higher Secondary Students
1	Distributed by Teachers	15 (3.9787)
2	Distributed by students	23 (6.1007)
3	Distributed by librarian	58 (15.384)
4	Not distributed	273 (72.413)

Data in Table 135 reveals that more than 70% of vocational higher secondary students claimed that library books were not distributed to students. 15.38% students reported service of librarian for the distribution of books. Other methods for distribution of books include distributed by teacher in charge (3.98%) and by students (6.1%).

Constraints in utilization of library facilities.

Table 136

Constraints in Utilization of Library Facilities

Sl. No.	Constraints in Utilization of Library Facilities	No of Responses
1	Lack of time	121 (32.1)
2	Lack of efficient working	176 (46.68)
3	Lack of knowledge about working	73 (19.36)
4	Lack of teachers support	3 (0.79)

Data in Table 136 reveals that the students pointed out four reasons for improper utilization of library such as, Lack of time (32.1%), Lack of effective working(46.68%), 19.36% students opined that they do not know about working of a library in their school, and 0.79% complained that lack of teachers support hinder the utilization of library facilities. All these created difficulties in utilizing library.

Laboratory facilities in higher secondary schools.

Data regarding effectiveness of laboratory in vocational higher secondary schools were collected and analysed. The results obtained are presented in the Table 137.

Table 137

Laboratory Facilities in Vocational Higher Secondary Schools (N= 313)

Sl. No.	Items	Vocational Higher Secondary Students
1	Efficient working of lab	253 (80.83)
2	Use the lab facilities during allotted time	271 (86.58)
3	Adequate facilities in the lab	205 (65.49)
4	Service of lab assistants while doing lab works	270 (86.26)
5	Teachers give clear instruction for doing practical	284 (90.73)
6	Satisfied with present functioning of lab	191 (61.02)

Of the total vocational higher secondary school students sampled, 253 (80.83) responded that they were satisfied with the functioning of lab. 86.58% higher secondary students were opined that they were utilise lab facilities in allotted time. 65.49% students agreed that there were adequate facilities in the lab. 86.26% students were opined that they got the service of lab assistant for doing practicals. 90.73% agree that teachers give clear instruction for doing practicals. Of the total higher secondary school students sampled, 61.02% responded that they were satisfied with the functioning of lab.

Laboratory utilization in allotted time.

When the students were asked about the reasons for lack of proper utilisation of lab in time, following answers were noted.

Table 138

Difficulties in Utilizing Lab Facilities in Allotted Time

Sl. No.	Difficulties in Utilizing Laboratory Facilities During Allotted Time	No of Responses
1	Lack of instruments and facilities	20
2	Laboratory periods used for theory classes	4
3	Teachers absent	3
4	Lack of time for doing practical	4
5	Class room used for laboratory	3
6	Due to lack of separate laboratory Technical high school laboratory is used for doing practical	3
7	Electricity problem	3
8	Teachers attitude	2
9	Asbestos so heat	1

Table 138 reveals the difficulties in utilizing lab facilities in allotted time consists the following. Lack of adequate instruments and facilities, Laboratory practical periods used for theory classes, absents of teachers, teachers negative attitude, lack of sufficient time for doing practical, and lack of facilities like separate room, electricity, and good roof.

Table 139

Reasons for Dissatisfaction in the Functioning of Lab

Sl. No.	Reasons for Dissatisfaction in the Functioning of Laboratory	No of Responses
1	important equipments-lack working capacity	23
2	Lack of adequate apparatus	17
3	Space/seating, facilities are lacking	6
4	Lack of Ventilation	6
5	Some objects for practical work, eg oil immersion, microscope etc are not available	6
6	Lack of time for practical work	5
7	Lack of systematic and scientific laboratory facility	4
8	Lack of neatness/Leaking building	3
9	Teachers' absence	2
10	Lack of first aid	2

Reasons for improper functioning of laboratory reported by students are important equipments-lack working capacity, Lack of adequate apparatus, space/seating facilities, Lack of Ventilation, Teachers negative attitude, Lack of neatness/Leaking building, Lack of first aid, Lack of time for doing practical, and teachers absent, lack of objects like oil immersion, microscope etc and lack of standard laboratory.

Computer lab.

The analysis for the availability of computer lab 27.32% of the students of the vocational higher secondary schools have responded positively regarding the availability of computer lab in their school.

Table 140

Availability and Utilization of Computer Lab in Vocational Higher Secondary (N=132)

Sl. No.	Items	No of Responses
1	Availability of computer lab	103 (78.03)
2	Adequate facilities in the lab	82 (62.12)
3	Internet facility	55 (41.67)
4	Service of lab instructor	95 (71.97)
5	Time is allotted specifically for utilization of lab	112 (84.85)
6	Utilise lab in allotted time	94 (71.21)

A close look at the data reveals that 62.12% of vocational higher secondary students argued that adequate facilities are existed in the lab. 41.67% students states that internet facilities available in the computer lab. Only 71.97% agree the service of an instructor in the lab. 84.85% of vocational higher secondary students opined that time is allotted in the time table for utilizing lab facilities. 71.21% agree the utilization of lab work in allotted time.

The reasons given for not getting computer lab in allotted time in vocational higher secondary schools reported by students are the following.

Reasons for not getting computer lab in the allotted time in higher secondary schools.

The major reasons for the non availability of computer practical were due to the following.

1. Lack of adequate computer
2. Electricity problem
3. Lack working computer
4. Lack practical periods
5. More than one student use one system at a time
6. Lack of instructor in lab
7. Lack of time
8. Used only for graphical design and printing technology

Physical education.

Data regarding availability of physical education to vocational higher secondary students had been analysed. The data obtained were consolidated and presented in Table 141.

Table 141

Physical Education Training VHSS Students

Sl. No.	Items	Yes
1	Availability of service of the physical education teacher	35 9.28
2	Participation in sports competition	112 29.71
3	Participation in athletic meets	68 18.03
4	Participation in games	39 10.34
5	Got training for participating in the events	58 15.38
6	Teachers' motivation for participating in sports	190 50.39
7	Due time for physical training as per time table	31 8.22

Table 141 shows that, 9.28% vocational higher secondary students stated the availability of service of the physical education teacher for physical training. 29.71% higher secondary students participated in sports. In sports 18.04% participated in athletic meets where as 10.34% participated in games. 50.39% higher secondary students opined that teachers motivated to participate in sports. Only 8.22% agreed the availability of time to physical training as per time table.

In the vocational higher secondary schools periods are allotted in the school time table but these periods are not used for physical education training. These periods are mainly utilizing for teaching and learning activities.

Toilet facilities to vocational higher secondary students.

Teaching learning process in the schools is closely linked with sanitation, health and school environment. Poor hygiene, poor quality of drinking water and lack of sanitation facilities cause various diseases each year (Quality council of India). The obtained data regarding availability of toilet facilities in vocational higher secondary schools had been analysed.

Table 142

Toilet Facilities to Vocational Higher Secondary Students

Sl. No.	Items	Yes
1	Availability of Toilet Facility	264 (70.03)

Data in Table reveals that, 70.03% vocational higher secondary students also agreed that adequate toilet facilities available in their school.

Data regarding defects of toilet facilities reported by vocational higher secondary students are the following.

Table 143

Inadequacies in toilet facilities

Sl. No.	Inadequacies of Toilets	No of Responses
1	Lack of water	103
2	Lack of neatness	118
3	Lack of door	52
4	Lack of sufficient number	31
5	Lack of napkin destroyer	20
6	Damaged	15
7	Students clean	9
8	Only two toilets for 120 students	8
9	not opened in Saturday	7
10	distant to the bathroom	5
11	Lack wash basin	3
12	Toilet nearby wash basin so no privacy	2
13	Salt water in rainy season create problems	1

The major defects of toilet facilities in higher secondary schools reported by students are the following. Lack water in the toilet, Lack neatness, Lack door, Lack sufficient number of toilets, Damaged toilets, Students clean, Lack wash basin, Lack of napkin destroyer, Less interval time it is difficult to utilise distant bathroom, and toilet nearby wash basin so no privacy.

Evaluation

Evaluation is a decision-making process that intends to lead students towards better performance and consequently helps to bring about qualitative

improvement in education (Quality council of India). Monitoring and evaluation of students' daily activities in the school premises are essential to effective teaching learning process. The obtained data regarding evaluation practices in vocational higher secondary schools had been analysed. The result of the analysis presented in Table 144.

Table 144

VHSS Students Evaluation

Sl. No.	Items	Yes
1	Unit test conducted at the end of each unit for all subjects	156 (41.38)
2	Unit test conducted at the end of each unit for some subjects	211 (55.97)
3	Unit test never conducted at the end of each unit	6 (1.59)
4	Valued answer scripts given back in time	283 (75.07)
5	More exams are required to assess academic excellence	258 (68.44)
6	Present evaluation system is efficient	236 (62.59)

A look at the percentage analysis of the data clearly shows that vocational higher secondary students (41.38%) agreed that unit tests conducted at the end of each Unit. More than fifty percent students reported that the unit tests were conducted only for some subjects. 75.07% agreed that they got valued answer scripts given back in time. 68.44% vocational higher secondary students also suggested that more exams were required to assess academic excellence. 62.59% vocational higher secondary students agreed that present evaluation system was efficient.

Problems in evaluation system.

Data in the Table gives the details of problems in evaluation system in higher secondary schools.

Table 145

Problems in Evaluation System

Sl. No.	Problems in evaluation system	No of Responses
1	Favoritism/ partiality	56 (14.85)
2	Practical exams conducted improperly	46 (12.20)
3	Teachers give marks without any standard	21 (5.57)
4	Lack of proper valuation of assignment and seminars	29 (7.69)
5	Focus only some students in the class	2 (0.53)

The major problems in evaluation reported by higher secondary students are Favoritism or partiality of teachers, practical exams conducted improperly; teachers give marks without illogically, lack of proper valuation of assignment and seminars, and focus only some students in the class.

Learning Activities**Availability of teacher for teaching and guidance.**

The following Table gives data regarding the availability of teachers for teaching and guidance.

Table 146

Availability of Teachers for Teaching and Guidance

Sl. No.	Items	Yes
1	Teachers for all subjects	333 (88.33)
2	Teachers give guidance in Curricular matters	318 (84.35)
3	Teachers give guidance in co curricular matters	120 (31.83)
4	Teachers give guidance in social matters	3 (0.79)
5	Teachers give guidance in discipline matters	1 (0.27)
6	Teachers give guidance in sports matters	1 (0.27)

From the Table 146, it was found that 88.33% of vocational higher secondary students reported the availability of teachers for all subjects. Higher secondary teachers give guidance to students on curricular, co curricular, social, discipline, and sports matters.

Method of teaching adopted by teachers.

Method of teaching adopted by vocational higher secondary teachers reported by vocational higher secondary students presented in the Table 147.

Table 147

Method of Teaching Adopted by VHSS Teachers

Sl. No.	Method of Teaching	Vocational Higher Secondary Students
1	Lecture method	151 (40.05)
2	Lecture demonstration method	92 (24.4)
3	Notes dictation	348 (92.31)
4	Group discussion	79 (20.95)
5	Field visits	91 (24.14)

Table 147 reveals that 92.31% vocational higher secondary students stated that note dictation is the method adopted by majority of teachers. The other methods like lecture method, discussion method afield visits etc is also practiced by teachers in vocational higher secondary schools.

Nature of learning activities adopted in vocational higher secondary class 148

Table 148

Learning Activities

Sl. No.	Learning Activities	No of Responses
1	Discussions	198 (52.52)
2	Seminars	244 (64.72)
3	Quiz competitions	31 (8.22)
4	Assignments	285 (75.59)
5	Debates	56 (14.85)
6	Class only	3 (0.79)
7	Work shop	1 (0.27)

Table 148 provides the information about the nature of learning activities in higher secondary schools. In vocational higher secondary the major learning activities taken place includes assignment (75.59), Seminar (64.72), Discussion (52.52), Debate (14.85)

Audio visual aids used by teachers in vocational higher secondary classes.

Teaching aids used by teachers for transacting curriculum are presented in the Table 149.

Table 149

Teaching Aids Used by Teachers in Vocational Higher Secondary Classes

Sl. No.	Audio Visual Aids	No of Responses
1	Computer	126 (33.42)
2	Projectors	155 (41.11)
3	TV	6 (1.59)
4	Models	32 (8.49)

From the Table 149 it was found that 59.42% of vocational higher secondary students agreed that teachers use different audio visual aids to take class. 41.11% vocational higher secondary students opined that projectors were used while teaching subjects. The other aids used by teachers includes Computer (33.42), Models (8.49), and TV (1.59)

Teacher pupil relationship.

Data regarding teacher pupil relationship in vocational higher secondary schools presented in the Table 150.

Table 150

Teacher Pupil Relationship in Vocational Higher Secondary Schools

Sl. No.	Teacher –pupil relation ship	Yes
1	Friendly relationship existing among teachers and students	286 (75.86)
2	Teachers efficiently supervise learning activities	315 (83.55)
3	Teachers giving timely guidance to simplify learning process	295 (78.25)

Table 150 shows that 75.86% of vocational students agree that good teacher pupil relation existed in their school. 83.55% of students states that teachers efficiently supervise learning activities. 78.25% students agree that teachers give timely guidance to simplify learning process.

Counselling and Training Programmes

Table 151

Counselor's Service in Vocational Higher Secondary

Sl. No.	Items	Yes
1	Service of counselor in higher secondary	195 (51.72)
2	Service of counselor available in : learning aspects	146 (38.73)
3	Service of counselor available in :Personal aspects	149 (39.52)
4	Service of counselor available in :Vocational aspects	31 (8.22)
5	Service of counselor available in :Adolescent issues	1 (0.27)

Data in Table 151 indicates that 51.72% vocational higher secondary students stated the availability of service of counselor in higher secondary .38.73% opined that they got the service of counselor for solving difficulties in learning related aspects.39.52% approach counselor for solving personal problems and 8.22% approach counselor for solving vocational issues. 0.27% approach counselor for solving adolescent issues.

Data regarding organisation and utilization of various training programme to HSS students presented in the Table 152.

Table 152

Organisation and Utilization of Various Training Programmes for Vocational Higher Secondary Students

Sl. No.	Items	Yes
1	Organise training programmes to get knowledge about procuring of job	209 (55.43)
2	Attend programmes organized in school	190 (50.39)
3	Whether such programmes are efficient	170 (45.09)

Table 152 reveals that 55.44% vocational higher secondary students opined that various training programmes were organized in their school to get knowledge about procuring of job. 50.39% students were attended such programmes. 45.09% agreed that such programmes benefited to them.

Participation in Club Activities

Participation of vocational higher secondary students in various clubs are presented in the Table 153.

Table 153

VHSS Students Participation in Various Clubs

Sl. No.	Items	No of Responses
1	NSS	293 (77.72)
2	Language club	1 (0.26)
3	Students protection cell	3 (0.79)

Table 153 shows that the participation of students in various clubs. It was found that 77.22% higher secondary students took permission in NSS.

Text Book

With a view to know true position of text book it was enquired from students about the language used, illustrations, arrangement etc. The information on this regard is as under

Table 154

VHSS Text Book

Sl. No.	Items	Yes
1	Simple language used	108 (28.65)
2	Sufficient no of illustration	135 (35.81)
3	Properly arranged contents	119 (31.56)
4	Method used for selecting books: Teachers suggestions	265 (70.29)
5	Method used for selecting books: Authentic source	71 (18.83)
6	Method used for selecting books: Use library	26 (6.89)

Data shows in the Table 154 reveals that 28.65% vocational higher secondary students were opined that language used in the text book was simple. 35.81% argued that sufficient number of illustrations was given in the text book. 31.56% opined that in text books contents were arranged properly.

70.29% vocational higher secondary students opined that they select books which were suggested by teachers. 18.83% refer authentic books and 6.89% refer library books.

Suggestions by VHSS Students

VHSS (MLT) (Group B- Branch 3 Allied health care) students pointed out various problems due to lack of facilities (Laboratory, Bell, Toilet, and Library), more number of students in a class, lack physical education teacher and counselor services, limit the working days in to five, limit the plus one admission process and delay in supplementary allotments, lack of adequate vocational guidance, reduce the biology content, lack of higher studies option (wayanad), change the teaching style and attitude of teachers, appoint efficient teachers, eliminate the discrimination between HSS and VHSS students, face difficulties due to lack of field work facility in hospitals, include maths in syllabus, and modify the course according to advanced technology.

VHSS animal husbandry(Group B-Branch 4-Animal husbandry-) students reported various difficulties such as lack of facilities (Laboratory, toilet, library,), lack of individual practice opportunity, more students in class, lack of computer education, lack of physical education teacher and PT period in time table, limit the working days in to five, limit the plus one admission process, change the learning style, orientation at high school level is needed about HSS, reduce the content in syllabus, lack of higher studies option, change the wrong attitude towards VHSS students.

According to *VHSS Agricultural science and processing Technology* (Group B- Branch 2- Agriculture) the major difficulties faced by students include lack of facilities (toilet, laboratory, ground,) lack of field work, more students in a class, lack of physical education teacher and counselor, delay in

the distribution of text book, lack of innovative courses, boring due to continuous class, lack of good learning style, lack of interval time, lack of orientation at high school level, reduce irrelevant contents, lack of higher studies option, and change the wrong attitude of teachers.

According to *VHSS Agriculture-Crop health management* students, the major problems faced by students include lack of facilities (toilet, laboratory, ground,) lack of field work, lack of innovative courses, limit the working days in to five, boring due to continuous class, lack of interval time, avoid unnecessary/ silly topics, lack of higher studies opportunities and confusion about future, lack of practical knowledge, discrimination between HSS and VHSS, lack efficient teachers, avoid insects collection from syllabus, lack of innovative courses, and change the wrong attitude of teachers.

VHSS Graphic Design and Printing Technology (Group A Branch 1 Engineering) students reported various problems such as lack of facilities (toilet, water, Physical training,), limit the working days in to five, in Saturday most of the teachers were absent, wrong attitude of teachers, appoint efficient teachers, damaged printing machine, only NSS is working in VHSS, discrimination between HSS and VHSS.

VHSS Computer science Information Technology (Group A Branch 1 Engineering) students reported difficulties such as lack of facilities (building, laboratory, toilet, water, PT), teachers leave on Saturdays affect classes, use of drugs by students, teachers irregularity, continuous transfer, lack of efficient teachers (not able to solve simple issues), discrimination between HSS and VHSS, career slate not working, limit the working days in to five,

ED text books are not available at the time of exam, learning burden, lack of field experience, improve the reputation of VHSS, first year computer syllabus good, now no need of c++, lack of guidance, lack of job oriented training.

VHSS Travel and Tourism (Group C Branch 7 Humanities) students suggest avoiding Saturday from working day, and simplifying exam.

VHSS accounting and taxation (Group D Branch 8 Business & Commerce) students reported Avoid Saturday class, Toilet distant place avoid discrimination between VHS & HSS, Saturday bathroom not opened, no importance to Physical education, need change in teachers attitude, not allowed to participate in activities compared to HSS section, admission to higher studies difficult, teachers absent on Saturdays, continuous class by a teacher boring, no imp to vocational training, introduce new courses, EDP & VT not valued at the time of higher studies, bad teacher pupil relation, not considering low achievers problems.

VHSS Marine Fisheries and Sea food Processing (Group B Branch 5- Fisheries) students reported difficulties such as lack computer lab, lack of facilities (library, permanent building and class room, laboratory, play ground, tidy bath room) disturbance from harbor, lack of neat school surroundings, difficulties due to travelling – (jankar/railway gate/ delay) not considered by teachers.

VHSS Automobile technology (Group A- Branch 1 Engineering) students reported various difficulties such as continuous transfer of teachers

weaken the system, language problem due to teachers from various districts, lack of adequate number of courses in schools, eliminate Saturday from working day, no importance to sports, lack of adequate facilities-(more students, no advance laboratory, no permanent building, inadequate toilet facilities, only one vehicle, 2 permanent teachers, total three rooms-plus one, plus two, teachers/office/principal room), continuous class boring (8.30-4PM), lack of freedom, 15 days OJT leads to printed notes

According to *VHSS civil construction technology* (Group A Branch 1 Engineering) students the major problems include limit the working days in to five, lack of vocation oriented course, interest is not considering at the time of admission, discrimination between HSS and VHSS.

Discussion

Course selection.

Majority of vocational higher secondary school students got admission in the interested course. And they wanted to take advanced education in their respective course after the completing plus two. Most of the students (83.55) like to join in the trained skill sector after completing vocational higher secondary. Of the total respondents a vast majority of them selected vocational course because they believed that courses are more benefited to them and useful to get job. Due to lack of receiving adequate training, interest, social acceptance of the course, and importance of the course majority of the students not interested to join in the vocational trade which is selected at higher secondary level of education. Most of the vocational higher

secondary students consulted teachers for clarifying doubts and 85.68% argued that teachers clarify the doubts raised by students.

Medium of instruction

More than half of the VHSS students faced difficulties in following class due to the change in the medium of instruction. Change in the medium of instruction created problems to proper understanding, writing, and studying of contents. Majority of students consult teachers for clarifying doubts and 85.68% argued that teachers clarify the doubts raised by students.

Physical facilities

Library facilities.

The analysis of the data obtained on the availability of library facility reveals that majority of vocational higher secondary students reported the lacking of adequate facility and resources in the library. The utilization of library facility is also not satisfactory. No proper library book distribution system is functioned in higher secondary. The major reason for the proper library utilization is due to the inefficient working of library.

Laboratory facilities.

The analysis of the obtained data regarding the availability and utilization of laboratory facilities in vocational higher secondary schools reveals that both the availability and utility of this is adequate. The difficulties in the utilization of facility include inadequacy of instruments and facilities, non availability of practical period, and teacher related issues. Reasons for improper functioning of laboratory reported by students are

important equipments-lack working capacity, Lack of adequate apparatus, space/seating facilities, Lack of Ventilation, Teachers negative attitude, Lack of neatness/Leaking building, Lack of first aid, Lack of time for doing practical, and teachers absent, lack of objects like oil immersion, microscope etc and lack of standard laboratory.

Computer laboratory.

The availability of computer lab facility in terms of rooms in VHSS is inadequate. The facilities in the existing computer labs are adequate with Internet facility. The major difficulties for the utilization of computer practical reported by students are lack of instructor, adequate no of computer, time, working computer, and electricity problems.

Physical education facility.

Physical education teacher's service is not available to vocational higher secondary students and no specific time in the time table for physical education in most of the schools. In the vocational higher secondary schools periods are allotted in the school time table but these periods are not used for physical education training. These periods are mainly utilizing for teaching and learning activities.

Toilet facilities.

The analysis of students' data reveals that toilet facilities were adequate in vocational higher secondary schools and they reported some defects in toilet facilities such as inadequate in number, lack of water, no neatness, poorly fixed or no door, etc.

Evaluation.

Students responded that, Unit tests are conducted regularly in some subjects but not for all subjects (55.97%). Students put forth the major reasons for inefficiency of present evaluation system include favoritism or partiality by teachers, improper conduct of practical exams, norms of evaluation, improper valuation of assignment, seminar etc.

Learning activities.

The analysis of the data obtained for the availability of teachers for all subjects reveals that the availability of teaching staff is satisfactory in vocational higher secondary schools and teachers give guidance to students on curricular, co curricular, social, discipline, and sports matters. The result reveals that giving notes (92.31%) is the method adopted by majority of teachers. The other methods like lecture method, discussion method afield visits etc is also practiced by teachers in higher secondary schools. The major learning activities taken place in higher secondary schools include assignments (75.59%), Seminar (64.72%), Discussions (52.52%), and Debate (14.85%). Some sort of audio visual aids were used by the higher secondary teachers such as OHP, computer, models and TV. There exists good teacher pupil relationship in vocational higher secondary schools.

Counselling and training programmes.

Most of the vocational higher secondary teachers (78.25%) gave timely guidance to simplify learning process. Counselor's services are availed by students (51.72%) from the schools having a counselor, for solving

various issues like issues related to - learning, personal matters, vocational matters, and adolescent problems.

Organisation and utilization of various training programmes.

School is a place where students with different abilities and talents are assembled. It is the duty of the school to provide various programmes that give the opportunities to the students to reveal their inherent abilities and talents. Various training programmes were organized by the vocational higher secondary school to get knowledge about procuring of job. Majority of them opined that these programmes benefited to them.

Participation in club activities.

It is the responsibility of every educational institution to provide such education that leads to the overall personality development of each and every student. Such kind of education includes both the academic activities as well as co-curricular activities. The vocational higher secondary schools were found performing well in NSS, Language club, and Students protection cell.

Text book.

As far the different items in the text book concerned both teachers and students agree with regard to lack of simplicity of language used in the text book, lack of logical ordering of contents, and lack of appropriate illustrations in the text book. Majority of vocational higher secondary students opined that they select books which were suggested by teachers.

Part D

Response of RDD of Higher Secondary Education Kerala

Regional deputy directors related with administration of higher secondary education in Kerala. They are concerned with sanctioning approval, introduction of courses, inspection of school, conducting various programmes etc. There were 6 Regional offices in Kerala (Trivandrum, Kottayam, Ernakulum, Malappuram, Kozhikode and Kannur). To know directors view point and experience on administration of higher secondary education personal interview planned with them. A scientifically structured interview schedule was prepared and used for this purpose. The main areas of the schedule were:

- De linking of pre degree course from colleges
- Quality, accessibility and individual attention
- Resources
- Learning strategy
- Opportunities and threats for higher secondary students
- Administrative constraints
- Single window admission procedure
- Evaluation
- Problems (if any) and suggestions

The interviewee made the following important suggestions

De Linking of Pre degree Course from Colleges

At first the investigator asked the interviewee to give their general views about the delinking of pre degree education.

Interviewee responded that the delinking of pre-degree courses from colleges resulted into higher accessibility of that course, because in the earlier periods there were only 3000-30000 students enrolled but now the number of entrants increased to nearly four lakh students. This really made the course accessible and universal to the society.

During the period of pre degree education only cream students got admission to science courses. Only about 20000 students got admission in science courses. But in the higher secondary courses there is provision for more than 1.5 lakh students to get admission in the science courses. This actually didn't deteriorate the quality of education because in this course there is access for cream students as well as the average students.

Individual Attention

The interviewee indicated that higher secondary education system has really made great impact in higher education compared to Pre degree education especially in the students amazing performance in entrance examinations like NIT, IIT, Kerala state entrance examination air etc. This is mainly because of the individual attention the students get through this education. In this system the plus one and plus two students were considered as students studying in the top step of the ladder of school education. These individual caring atmospheres were not seen in the Pre degree scenario. This made way for the students having high caliber to attain at his maximum level.

Faculty.

Interviewee observed that majority of the teachers working in government higher secondary schools is highly qualified with sound

knowledge in their subject who selected through various testing procedures. But it is seen that some teachers became self oriented and lower committed after getting appointment. In order to maintain the quality of faculties the following measures were suggested by the RDD.

- Regular monitoring of teachers,
- Conducting social audit of teachers,
- Give necessary orientations to various teacher organizations.

Interviewee put forward the following suggestion to organizations and teachers:

- Not to make struggle for benefit only but struggle for improving the efficiency of teachers.
- Change the outlook of teachers.
- To increase the social commitment.
- Teacher should be a role model for students
- Discussions should be conducted on social issues with students.
- Teachers should update their knowledge and should prepare very well for coming classes.

Curriculum.

The following constraints were listed by the RDD regarding the student centered cooperative and collaborative learning.

- Over strength of the higher secondary classes.
- Not practical for teaching science classes.

- Overloaded syllabus
- Lack of time.
- Practical difficulties to attain concepts which were very deep.
- Students were interested only in bookish knowledge because high scores in competitive examinations were secured only through vast bookish knowledge.
- Collaborative and cooperative learning is suitable for humanities subject only because in this subject construction is possible. Divergent thinking is essential for a subject like this. Really through this learning divergent thinking.
- For intelligent students of any stream this method is very much suitable because they capture information through divergent thinking.

Employment sector.

The number of students who passed in plus two is high compared to Pre degree. So this made an increase in the number of qualified job seekers.

The teachers should ensure whether the students attain minimum level of learning while entering the plus two classes to improve the quality of higher secondary education.

Administration

Regarding the administration the RDD had the following view points, administration is very weak due to lack of adequate supporting staff. The

directorates spent most of their effort in solving cases related to aided schools regarding to the issues in the appointment of teachers because of the lack of clarity in special rules. Most of the managements implement the rules in their own way for their own benefit.

The following suggestive measures were put forward by RDD

- The teachers should elevate their interest in teaching to improve their quality.
- There should be measures to check their social commitment and should be made aware that there won't be any existence for them without the support of society.
- The teachers should be given awareness about their duties and responsibilities.

Single window

In order to solve the problems in single window admission process RDD put forth the following suggestive measures. The students should be given orientation regarding admission procedure from the school during their end of SSLC itself. The students should be given opportunities to submit the online applications from their own schools while receiving the SSLC certificates. According to him the help desk is functioning properly in all schools.

Evaluation

The interviewee made the following important suggestions for the scientific evaluation of performance. The invigilation duty should be made

strict .The teachers should consider the camp evaluation seriously. In the camp evaluation a senior teacher should be given charge and should value one or two papers and ensure correctness.

Discussion

RDDs are the administrative officers related with the administration of higher secondary education. To know their experience and view points on administrative and academic aspects of higher secondary system (More than twenty years as HSST) an extensive interview was conducted according to the schedule chalked out for this purpose. The suggestions put forth by the interviewee equally important which will result in better administration.

Response of ASAP Coordinators of Higher Secondary Schools in Kerala

The investigator used interview as a technique for collecting data from ASAP coordinators in HSE. Seven coordinators were interviewed which served as supplementary to the data collected through Questionnaire. Through the interview the investigator was able to gather information on the following:-

All coordinators (7) responded that ASAP course provides more employment opportunities to students and they opined that ASAP course help students to gain technical skill along with regular course of study.

For higher secondary students two modules of ASAP course were given in the selected skill areas in the plus one and plus two respectively. The skill courses in ASAP includes CAI, Hard ware, and net working, food and beverage etc.

100% (7) coordinators responded that there were no difficulties to get advanced training in the opted skill sector through ASAP. All coordinators opined that funds were allotted by the Govt. of Kerala. Lack of adequate time was the major constraint faced by all (7) coordinators for coordinating various activities of ASAP.

Discussion

Interview with ASAP coordinators provide a deep insight in to the benefits and difficulties related to ASAP courses. The views of the respondents confirm that the students can gain the technical skills along with regular course of higher secondary education yet it has been faced with problem of lack of adequate time for the conducting of course.

Part E

Observation of Facilities

One of the major objectives of the study was to investigate the infrastructural facilities in higher secondary and vocational higher secondary schools in Kerala. The investigator analysed the data to bring light on to this objective in the following manner. The sampled schools were categorised into higher secondary schools and vocational higher secondary schools. All these schools were analysed generally. Individual analysis of school is not possible because individual analysis of schools will make this report voluminous.

Physical infrastructure of the higher secondary education system

Higher Secondary Schools

Classroom.

- The items included in this section helps to get information about lighting facility, ventilation, fans, and details of furniture in the class room.
- During the field study it was found that facilities in the class room were adequate in 12 out of fourteen higher secondary schools observed. Well furnished class rooms for taking classes were noticed in 3 higher secondary schools. In these schools enough bench and desk are present, seating arrangements proper and the class rooms were sufficiently lighted and provided with proper ventilation.
- Some of the classes were functioned in high school/ auditorium section; it shows the shortage of class rooms were seen in this school.
- The condition of roof was pathetic in many higher secondary schools observed. One hall partitioned temporarily in to five classes.
- In some schools situated in the heart of city. In these schools there is no calm and quite environment is available to students.
- Lack of electricity in the class room is the problem faced by some schools.
- Working fans are not available to 12 class room observed
- Facilities like bench and dusks were inadequate or damaged in five higher secondary schools.

Staff room.

- Infrastructural facilities in the staff room was measured by eight items such as electrified or not, furniture, writing facilities, document keeping facilities, and general facilities available in the staff room.
- The infrastructural facilities in the studied higher secondary schools were poor.
- Many of the higher secondary teachers staff room observed were in bad shape. The facilities available in the staff room (Writing Table, board, book keeping facilities, chair) were found to be not supplied in requisite quantity. Writing boards were not seen in all higher secondary schools observed and the arrangements in the staff room were untidy and gave a clustered outlook except in one school. In one school no separate staff room, staff room and office room functioned in the same room with temporal partitioning.

Library.

- There were few higher secondary schools even without separate library facilities for higher secondary section. No school had a separate reading room except one government higher secondary school. Service of librarian is not available in all the government schools observed. Most of the higher secondary schools do not take steps for issuing books to students.

Laboratory.

- Under laboratory facilities information regarding facilities available in the laboratories was studied. Subject laboratory were present in all the schools.

Computer lab.

- Under this computer lab facilities in higher secondary schools have been studied. All the higher secondary school studied have some sort of computer facilities. Computer lab facilities available only to higher secondary students whose subject of study was Computer based others have no chance to get practical skills in computer at higher secondary schools.

Physical education.

- Under physical education facilities availability of physical education teacher, play ground, and sports and games materials were observed. It is found that the condition of play ground is not satisfactory in most (6) of the higher secondary schools. Two schools running without sufficient play ground.

Principal room.

- General condition of principal's room was checked by two items i.e. whether there is a separate room for principal and furniture and facilities available. It is found that in most of the higher secondary schools principals rooms were attached with office room. Principals' room facilities in studied higher secondary schools were adequate.

Store room.

- Store room facilities were not available in all the sampled higher secondary schools.

Students' rest room.

Observation reveals that neither in Government nor in aided higher secondary schools have the facilities for restroom. The toilet facilities were inadequate and in bad condition in all the schools observed.

Vocational Higher Secondary Schools

Physical infrastructure of the vocational higher secondary education system.

Class room.

- Of the eight vocational higher secondary schools observed facilities in the class room were adequate in four out of eight schools observed. Well furnished class rooms for taking classes were noticed in 50% vocational higher secondary schools. Enough bench and desk are present, seating arrangements proper and the class rooms were sufficiently lighted and provided with proper ventilation in these sampled schools.
- Facilities like bench and desks were inadequate or damaged in four vocational higher secondary schools .
- The condition of roof was pathetic in one vocational higher secondary schools observed.
- Working fans are not available to four class room observed.

Staff room.

Staff room observed in six vocational higher secondary schools were in bad shape except two schools. The facilities available in the staff room (Writing Table, board, book keeping facilities, chair) were found to be not supplied in requisite quantity. All staff rooms observed was attached with office room/ principal room except one school.

Library.

Separate library was not found in any of the vocational higher secondary schools observed during the field study. The books were kept in some shelves in the staff room or principal's room in one school. Most of the vocational higher secondary schools do not take steps for issuing books to students.

Laboratory

- Under laboratory facilities information regarding facilities available in the laboratories was studied. Subject laboratories were present in all the schools.

Computer lab.

- Under this computer lab facilities in vocational higher secondary schools have been studied. All the vocational higher secondary school studied have some sort of computer facilities. Computer lab facilities available only to vocational higher secondary students whose subject of study was Computer based others have no chance to get practical skills in computer at vocational higher secondary schools. IT @ school

provided computers to school but these computers keep at high school SSA lab in one school observed.

Physical education facilities.

Under physical education facilities availability of physical education teacher, play ground, and sports and games materials were observed. It is found that the condition of play ground is not satisfactory in most (4) of the vocational higher secondary schools. In all the schools observed separate physical education teacher were not available.

Principal room.

It is found that all the vocational higher secondary schools principals rooms were attached with office room. Principals' room facilities in studied higher secondary schools were inadequate in all the schools observed.

Store room.

Store room facilities were not available in all the sampled vocational higher secondary schools.

Students' rest room.

Observation reveals that neither in Government nor in aided vocational higher secondary schools have the facilities for restroom. The toilet facilities were inadequate and in most of the toilets observed were in bad condition.

Discussion

The relevant data regarding the infrastructural facilities in higher secondary and vocational higher secondary were collected from teachers,

principals, students, and by observation. Mostly the opinion of different sources agree vis a vis the different areas of infrastructural facilities.

Part F

Analysis of Diaries

Diary Analysis of Higher Secondary Teacher

The writings in the diary for the academic year were consolidated to find out a continuous progress of activities in a higher secondary school in an academic year 2014 - 15.

Duties other than academic work.

There were several diary entries which indicate that the teacher is busy in almost all the days with duties related with teaching as well as official duties assigned by the authority.

Text book distribution.

Teacher's diary clearly depicts the text books were not available to plus one class till 21/07/2014. This really support the views obtained from the students diary.

Delay in admission process

The teacher reported that the first year allotment process continued till 18/08/2014, even though the plus one classes started on 08/07/2014. This continuous allotment process till the end of the first term of plus one classes really affected the smooth functioning of the classes. This frequent transfer and admission created confusions in the mind set of new entrants. Teacher is

reported that admission duties are distributed among teachers such as certificate verification, attestation, collection of applications, maintenance of temporary attendance register, computer related works like option cancellation, etc.

Other activities and programmes.

The teacher noted in the diary about the conduct of various programmes by clubs and organizations functioning in the school. Even though the programmes were useful for the students, the teacher reported that those programmes cause losing of academic hours. Teacher's diary entries clearly shows that NSS, Souhrida, CG&ACC, ASAP functioned effectively and these initiatives of DHSE conducted a number of activities and programmes to the higher secondary students.

Parent Teachers Association.

Teacher's diary entries clearly reported the various meetings and programmes to parents are organized successfully in school. PTA general body meeting conducted on 19/9/2014 afternoon for council election. Separate subject and class wise PTA meetings were organized in School for several times.

Administrative issues.

Teacher reported that plus one seat increased by 20% on 21/7/2014. Teacher's diary entry clearly depicts the first year class started on 14/7/2014. Second allotment token distributed on 7/7/2014. It means after the first and second allotment the plus one seat is increased by 20%. Teacher is anxious

about the losing of academic hours of these students due to the prolonged admission process.

Sports and arts festival

Diary entry in teacher' diary clearly depicts that all kinds of co curricular activities are organized in school. Sports competition and sports meet were conducted on 14th and 15th October 2014, Arts festival is conducted on 20th and 21st October 2014, and science fair conducted at Melmuri higher secondary school (sub district level competition). Diary entry on 20th august 2014 related with the sports selection process and the teacher reported that this was done by high school physical education teacher with the help of higher secondary teachers. Diary entry on 21/8/2014 shows the sub district level sports meet for higher secondary students.

Teacher empowerment activities

Diary entry in teacher's diary shows the details of training programmes to higher secondary teachers concerned with syllabus change. The training programmes are arranged in two sessions. First session is for the subject teachers for a period of five days (10th November 2014 to 14th November 2014, next session focus on other teachers for a period of three days.

Cluster meeting and valuation camp

Subject wise Cluster meeting was conducted on 5/1/2015. 22/9/2014 to 25/9/2014 teacher is in valuation camp. Teacher reported that it affects the working hours and negatively affect the classes.

Diary Analysis of Higher Secondary Student

The writings in the diary for the academic year were consolidated to find out a continuous progress of activities in a higher secondary school in an academic year 2014 - 15. As a result of the analysis of higher secondary student's diary various issues were identified.

Admission related issues.

There are several diary entries which show negative feedback about delayed admission process in higher secondary. Classes started on 8th July 2014. On August 17th more students were admitted to science batch through supplementary allotment. Even though the classes was started on 8th July, the supplementary allotments of students continued till 17 august created lot of confusions and difficulties in the plus one classes for both new entrants as well as the already existing students. There are students transferred to other schools also on the basis of their choice of institution.

Availability of textbooks.

Student's diary included several entries about the issues related with late arrival of text books. Plus one class was started on July 8th 2014. They got Hindi text book on 27th July. Text books are issued only after the third week of the academic year. This can be considered as a drawback of the system.

In the initial stage, the student faced difficulty in understanding all the science subjects because of the change in medium of instruction.

Teaching related issues.

Student's diary entry included entries indicating issues related with teaching. The student felt little difficulty in understanding Botany classes

properly because the teacher took the class in a speedy way without considering the level and attainment of the new entrants. Majority of students not able to answer the questions related to the topics taught in the previous class.

English teacher checked the home works daily. Some teachers asked questions about previous topics. The various approaches of teaching suggested in the curriculum programmes are not much practiced in the higher secondary classes. The method of teaching in those classes is the note giving by teachers. They mainly gave Xerox copies of printed notes. These printed notes really put the students in great dilemma.

Issues related to continuous classes (Problems in time table).

There are several entries in the diary which shows the negative feedback from student about time table. Timetable was not scientific in the initial stages. In the initial stages a temporary timetable was set up without considering the principles of timetable construction. Most of the subjects were taught continuously for 2 hours without considering the attention span of learners.

Rewards and punishments.

There are several entries which show that positive feedback from the teacher in the initial stage led to student's positive feelings and self encouragement. In the initial stages some teachers usually asked questions and tested the attainment and abilities of students and gave rewards /punishments accordingly. But as the classes proceeds due to the busy schedule and lack of time the teachers stopped those practices.

Issues related to discipline.

Student's diary clearly depicts due to the lack of proper interference of school authorities towards disciplinary issues, the student's attendance was

very low in many days. Also those who attended the classes skip many hours. Many of them arrived late in the first hour. But after the change of headship there occurred a drastic change in the school discipline. The new principal took disciplinary actions on the late comers. He stood in front of the gate to pick the late comers. The new principal took action against the students who were not in proper uniform. Teachers took actions to late comers from January 22nd onwards.

Issues related to teacher's transfer.

The frequent transfer of teachers created a lot of problems for the students was identified from several diary entries. They missed lot of hours due to this. The students found very difficult to cope up with the classes of different teachers in the same subject in the same academic year itself. This is the unique problem in government schools only.

Frequent dispersal of classes.

Student's diary entries shows the classes were dispersed frequently due to various programmes and other reasons. This really reduces the working hours.

Assembly.

Student's diary entry mention the first assembly was conducted on 28th july (APJ's death). Next assembly was conducted on November 20th. This shows that the school authority was not much concerned on conducting school assembly. The next assembly was arranged on first January. The main theme of the assembly conducted on January 8th is related to exam. January 22nd onwards the assembly was organized by plus one classes. The last assembly conducted on February 24th. Only six assemblies were conducted in

the whole academic year. Through diary analysis it was found that there was no proper arrangement for morning assembly in higher secondary school.

Non-completion of portions.

The portions for the course were not completed till January 28th so that the students won't get enough time to prepare for the model examination which was scheduled on February 4th. This will definitely leads to low performance in the final examination.

Working days / hours.

Students diary entries clearly show that most working days were used for various programmes it leads to losing of working hours.

- Early disbursed due to id- July 16
- Aug 4-Ornithology class, quiz
- Aug 6- hiroshiana day quiz
- Aug 11-Retirement party ½ day class
- August 13-Freedom day quiz, Elocution competition
- September 2- Harthal
- September 4th ½ day class-Plus two exam
- September 17th quiz programme related with civil service coaching selection
- September 30th Akshara muttom quiz, Early disburse class
- October 1-5 - plus two improvements.
- October 3rd Special time table class (Teachers not present so no class)
- October 10th-Entrance coaching started
- October 12th Science quiz-Science fair
- October 13th onwards teachers busy with improvement

- October 14th ½ class
- October 20, 21-Sports meet
- October 26-Majority teachers are on Election duty
- November 4th -1/2 day class
- November 11th –Arts day
- November 20th drama competition
- November 30th – Early disburse class
- December 2nd – Early disburse class
- December 14, 15, 16, 17-Half yearly exam
- December 18th -½ day class
- January 1- New Year celebration
- January 13th parents meeting
- January 14th Plus one parents meeting
- February 4-11-Model exam
- February 25th Plus two Send off early disburse

NSS.

Students diary entries reveal the efficient functioning of NSS in higher secondary school and it conducted a number of programmes throughout the academic year. Student also reported that the NSS conduct camp and it is a new experience to the participants.

Diary Analysis of Vocational Higher Secondary Student

The writings in the diary for the academic year were consolidated to find out a continuous progress of activities in a higher secondary school in an academic year 2014 - 15. As a result of the analysis of Vocational higher secondary student's diary various issues were identified.

Issues related to continuous classes (Problems in time table).

There are several entries in the diary which shows the negative feedback from student about time table. It was not scientific in the initial stages. In the initial stages a temporary timetable was set up without considering the principles of timetable construction.

Vocational subjects.

Student's diary included diary entry indicating her satisfaction with selecting vocational subject by stating vocational subjects help the student to know about the surroundings.

Busy schedule of teachers.

Student's diary included several entries indicating her dissatisfaction with the busy schedule of teachers. Teachers were busy with evaluation or related work during the academic time affects regular classes.

Assembly

Student's diary entries mention Class assemblies were conducted rarely in school.

Co-curricular

As a result of the analysis of student's diary reveals that only NSS functioned effectively in the school.

NSS

Students diary entries reveal the efficient functioning of NSS in vocational higher secondary school and it conducted a number of programmes throughout the academic year. The student reported NSS camp

was interesting and enjoyable and it is entirely a different experience to the participants.

Discussion

By analyzing the diary of higher secondary teachers it is found that higher secondary teacher is busy in almost all days due to various duties related to academic and non academic matter. Teacher also pointed out various problems such as delay in text book distribution, admission procedure, examination and evaluation, etc and the teacher is anxious due to losing of academic hours.

The analysis of the student diaries reveals that there is no systematic planning and administration of admission procedure and it delayed. The diary entries also indicate the felt problems of delayed admission process such as loss of classes due to transfers, lack of proper conduct of classes and more free periods in the initial stage. The students also reported the efficient performance in NSS as a member. They also reported about the busy schedule of teachers. Diary entry clearly reveals assemblies are organized rarely.

The cross checking of the findings of this analysis with the data obtained from three diaries further made the investigator to conclude about the lack of proper administration of the higher secondary system in Kerala. Thus by critically analysing the data obtained through the above various sources it can be emphatically concluded that the higher secondary education system in the state has been suffering from serious handicaps and deficiencies.

Chapter V

SUMMARY FINDINGS

CONCLUSIONS & SUGGESTIONS

- *Study in Retrospect*
 - *Major Findings*
 - *Summary of Major Findings*
 - *Conclusion*
 - *Educational Implications*
 - *Suggestions for Further Research*
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SUMMARY, FINDINGS, CONCLUSIONS, AND SUGGESTIONS

This chapter presents an overall summary of the study, findings, summary of major findings, conclusions, educational implications, and suggestions, presented in a concise way.

Study in Retrospect

Restatement of the Problem

The present study was intended to examine critically the HSS education system in Kerala. The problem was stated as “**A CRITICAL STUDY OF HIGHER SECONDARY EDUCATION SYSTEM IN KERALA**”.

Objectives of the Study

1. To study the structure of course, subject combination, and infrastructural facilities in higher secondary and Vocational higher secondary education in Kerala.
2. To study academic aspects of higher secondary and Vocational higher secondary education in Kerala.
3. To study administrative aspects of higher secondary and Vocational higher secondary education in Kerala.
4. To identify the major problems existing in higher secondary and vocational higher secondary education system in Kerala

Methodology in Brief

Design of the study.

The purpose of the present study was to critically analyze the higher secondary education system in Kerala. So an indepth investigation was needed for fulfilling the objectives. Data was collected from different sources for this purpose. Hence, the study came under the design of mixed type research. Higher secondary level education in the state has two streams such as higher secondary and vocal higher secondary. Document analysis was done extensively to trace out the historical development of higher secondary level education. A survey was conducted with students, teachers, and principals as major sample from both HSS and VHSS. Diary method, was also used for collecting longitudinal data on daily activities of HSS and VHSS. Interview and observation were the techniques used for getting rich qualitative data required for the study. The data was analyzed using both quantitative and qualitative procedure.

Methods used.

In this study, the investigator used document analysis, survey, and diary as methods for collecting data. Since the study is dealt with the development of higher secondary education, the method adopted by the investigator involved analysis of documentary sources and recording of events and critical interpretation of the data collected. The study therefore concerned with description and analysis of the various documents on various aspects of higher secondary education in Kerala. Survey was conducted to gather opinion of principals, teachers, Regional Deputy Director (RDD) of Higher Secondary Education, Additional Skill Acquisition Programme

(ASAP) coordinators, and students. Surveys were conducted using various tools such as questionnaire, interview schedules and observation schedules. Through diary method the researcher planned to gather data from teachers and students on; the daily activities in the school and to triangulate the data obtained through other methods. Three diaries were arranged for the study, one each for students on HSS and VHSS, and the other one with HSS teacher. Investigator was unable to identify a willing VHSS teacher to assign the duty of writing daily diary.

Sample.

The data for the present study was collected from the selected higher secondary schools belonging to rural, urban, coastal and tribal areas. Hence the population of the sample includes all the higher secondary schools and vocational higher secondary schools in Kerala and students, teachers, coordinators and principals.

The sample of the study included Regional Deputy Director, Principals (HSE 67, VHSE 16), teachers (HSE 145, VHSE 37), students (HSE 715, VHSE 377) and ASAP coordinators (7).

The investigator took necessary care to ensure representation of the sample by giving adequate representation to gender, locality, age, qualification, teaching experience and type of management of institution.

Techniques used for the study.

The techniques such as interview and observation were employed for the study.

Tools used for the study.

In order to fulfill the objectives of the study the following tools were used for collecting data.

- i. Questionnaire on Higher Secondary Education System for Higher Secondary Teachers. (Anitha & Nath, 2014)
- ii. Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Teachers. (Anitha & Nath, 2014)
- iii. Questionnaire on Higher Secondary Education System for Higher Secondary Students (Anitha & Nath, 2014)
- iv. Questionnaire on Vocational Higher Secondary Education System for Vocational Higher Secondary Students (Anitha & Nath, 2014)
- v. Interview schedule to Higher Secondary Principals (Anitha & Nath, 2014)
- vi. Interview schedule to Vocational Higher Secondary Principals (Anitha & Nath, 2014)
- vii. Interview schedule for RDD of higher secondary education
- viii. Interview schedule for ASAP coordinator
- ix. Observation schedule on Facilities in Higher Secondary Schools (Anitha & Nath, 2014)
- x. Observation schedule on Facilities in Vocational Higher Secondary Schools (Anitha & Nath, 2014)
- xi. Diaries for HSS & VHSS Students and HSS teacher.

Along with various tools and techniques the investigator relied on various documents and other sources to supplement the data.

Technique of analysis.

In this study the investigator made use of percentage analysis for the analysis of data collected through questionnaires and interview with principals. The percentage analysis helped the investigator to make an analysis of the response of principals, teachers and students of higher secondary and vocational higher secondary schools. The investigator used verbal description for thematic analysis of qualitative data collected through documents, diaries and interview schedule to ASAP coordinators.

Major Findings

Major findings of the study are summarized under the following aspects

Accessibility of School Location

- In the opinion of majority of the HSS principals (88%), and VHSS principals (75%) location of school is easily accessible for students and teachers.

Infrastructure Facilities

- Majority of principals, (HSS (57%), and VHSS (75%)) were of the opinion that, infrastructural facilities in the school are not satisfactory.
- The scarcities reported by HSS principals include building facilities like Class rooms, office room, girls room/Refreshment room, staff room, office room, girls room/Refreshment room, staff room, sick room, lab facilities, library and reading rooms, toilet, smart room, auditorium, etc. Play ground, furniture, black board, cleaning facilities, water, etc.

- The scarcities reported by VHSS principals include building facilities such as Class room, lab, library, smart room, space for work experience, office room, rest room, urinals, and toilets. They also reported shortage of furniture and laboratory equipments.

Library Facilities

- Teachers (HSS 76%, VHSS 83%) opined that dictionaries and other reference materials are adequate in school library
- Students opined that learning resources for HSS students are inadequate (HSS students 68%, VHSS students 80%).
- Library facilities are not satisfied to HSS students (53%) and by VHSS students (70%).

Utilisation of library facilities.

- There were problems in the utilization of library facilities (HSS teachers 43%, VHSS teachers 30%).
- The nine problems identified by teachers, that hinder proper utilization of library facilities such as lack of time due to regular work load, no well set up libraries, lack of adequate books, lack of librarian, availability of teacher in charge of library, lack of students' interest, lack of separate library for HSS and VHSS.
- Majority of students (HSS 74%, VHSS 80%) are not utilizing library facilities in free time.
- The students pointed out six reasons for improper utilization of library such as, Lack of time, Lack of efficient working, Lack of

knowledge about working, Lack of interest, lack of books, and Lack of teacher's support.

Teacher Encouragement for reading.

- Majority of teachers (HSS 97%, VHSS 97%) encouraged students for reading
- Teachers encouraged to utilise library facilities (HSS students 63%, VHSS students 71%).

Distribution of library books.

- In HSS library books were distributed in different ways such as distributed by teacher in charge (8.95), distributed by students (5.73), distributed by librarian (23.36) and majority of students (58.6%) opined that the library books were not distributed.
- In VHSS, library books were distributed using different ways such as distributed by teacher in charge (4%), distributed by students (6%), distributed by librarian (15%) and majority of students (72%) opined that the library books were not distributed.

Laboratory Facilities

- Majority of students (HSS 80.86 %, VHSS 80.83 %) were opined that lab works are done efficiently in schools.
- Students (HSS students 80.25, VHSS students 86.58) were opined that they utilized laboratory in allotted time.
- Some students reported certain difficulties in utilizing lab facilities in allotted time due to utilization of practical periods to take theory

classes, lack of adequate instruments and facilities, leave of teachers, attitude of teachers, lack of enough time for doing practical, lack of separate lab (high school lab used), lab functioned in an asbestos shed so extreme hot it is impossible to do practical, etc.

- Most of the Students (HSS 81%, VHSS 65%) are satisfied with laboratory facilities in school.
- Laboratory assistants have a major role in making necessary arrangements and setting in laboratories. HSS students (85.8%) and VHSS students (86.26%) were opined that they got the service of laboratory assistants for doing practical.
- According to HSS (96.29%) and VHSS (90.73%) students teachers are giving clear instructions for doing practical work.
- Majority of Students (HSS students 64%, VHSS students 61%) are satisfied with the functioning of laboratories.

The availability and utilization of laboratory facilities.

- Teachers (HSS 39%, VHSS 42%) felt difficulties in providing instructions during the conduct of practicals.
- Majority of HSS teachers (87%) are able to ensure that every student doing practical work, and nearly half of the teachers (41%) provide individual instruction for lab work. They opined that, students get enough practical skill through lab work (81%),
- Majority of VHSS teachers (88%) are able to ensure that every student doing practical work, and more than half of those (58%)

provide individual instruction (58%). They opined that, students get enough practical skill through lab work (75%).

Shortcomings in the laboratory.

- Teachers (HSS 41%, VHSS 46%) reported many shortcomings in the laboratory such as, lack of adequate instruments, adequate space, appropriate syllabus for practical, chemicals, equipments, glass wares, etc. In many schools there are no separate labs for different subjects, and high teacher pupil ratio are the shortcomings.
- According to students, the major shortcomings in the laboratory include lack of apparatus, lack of working equipments, lack of adequate facilities-ventilation, lack of building, first aid, microscope, space, and high strength of students for lab work.

Computer Lab

- The availability of computer lab facility in terms of rooms in HSS (HSS Students 93.18%) and VHSS (VHSS students 78.03%) are inadequate.
- Students (HSS 70%, VHSS 61%) opined that facilities in the existing computer labs are adequate with Internet facility HSS (67%) and VHSS (42%)
- Separate time is allotted to use computer lab (HSS 75%, VHSS 85%), and Students utilized computer lab in the allotted time (HSS 70%, VHSS 71%). The reasons for improper utilization of computer lab in allotted time include, lack of adequate computers, electricity problems, lack of practical periods, lack of computer instructor, and lack of adequate time.

Facilities for Physical Education

Service of physical education teacher.

- Students (HSS students 69%, VHSS 91%) opined that physical education teacher's service is not available to them and no specific time in the time table for physical education in most of the schools (HSS students 80%, VHSS students 92%).
- Only few HSS (30%) and VHSS (30%) students participated in sports. Among them very few of HSS students (102) and VHSS students (58) opined that training facilities are available in school.
- A very few percentage of HSS and VHSS students are participated in athletic meets (HSS students 20%, VHSS 18%) and games activities (HSS 18%, VHSS 10%), though teachers motivated them to participate in sports and games (HSS 59%, VHSS 50%).

Toilet Facilities and Neatness of School Surroundings

- According to students (HSS students 63%, VHSS students 70%) toilet facilities are adequate in school. They pointed out various shortcoming in toilet facilities in schools such as inadequate in number, lack of water, no neatness, poorly fixed or no door, etc.

Evaluation

- Most of the HSS (88%) and VHSS (84%) teachers adopt regular self evaluation to monitor effectiveness of their instruction. Teachers took feedback (HSS teachers 74%, VHSS teachers 57%) from students, self monitoring, audio and video recordings, checking of assignment and test result, introspection and peer assessment for this purpose.

Unit test and distribution of valued answer scripts.

- Most of the HSS (82.07) and VHSS (81.08) teachers conducted unit tests regularly, and objectively (HSS teachers 75%, VHSS teachers 68%). Teachers (HSS 81%, VHSS 76%) maintained students profile based on CCE. Most of them (HSS 90%, VHSS 81%) given back the valued answer sheet, students also (HSS 77%, VHSS 75%) agreed to this.
- Students responded that, Unit tests are conducted regularly in some subjects but not for all subjects (HSS students 68%, VHSS students 59%).

Effectiveness of evaluation system.

- Majority of students (HSS (70%, VHSS 68.44 %) viewed that, more number of exams are required to develop academic excellence.
- Student evaluation system is effective (HSS students 60%, VHSS students 63%). Students put forth the major reasons for inefficiency of present evaluation system include favoritism or partiality by teachers, improper conduct of practical exams, norms of evaluation, improper valuation of assignment, seminar etc.

Constraints in evaluating students performance.

- Teachers pointed out various constraints in evaluating students performance such as on the spot evaluation of group activities, evaluation o home work in time, evaluation of project work, seminar evaluation etc.

Valuation Camp

- A large quantum of teachers (HSS teachers 87.51%, VHSS teachers 100%) opined that, camp valuation during vacation doesn't create various difficulties to them.
- Many HSS (68.28) and VHSS (75.68) teachers opined that camp valuation is effective. Teachers suggested various measures for improving the camp valuation such as maintain strictness, ensure compulsory attendance of all teachers, provide adequate facilities, only deserving mark should be given, and arrange CV camps at district head quarters, not in remote places.

Constraints in conducting CCE.

- The constraints felt by teachers in the conduct of CCE include lack of adequate time, evaluation of social values, evaluating group activities on the spot, difficulty in recording details of evaluation in time, high teacher pupil ratio, evaluation of practical work, excess work load, and lack of proper guidelines for assessment.

Curriculum

- Teachers (HSS 67%, VHSS 81%) believed that syllabus is adequate.
- In the opinion of teachers (HSS 72%, VHSS 49%) student centered teaching is possible for their subject.
- Majority of teachers have adequate time for preparation (HSS 81%, VHSS 89%).
- In the opinion of teachers (HSS 66%, VHSS 86%) students reached in HSS are not acquired minimum standards in secondary stage. So have to arrange remedial lessons to needy students (HSS 52%, VHSS 62%).

Sufficient time for Curriculum transaction.

- According to teachers (HSS 34%, VHSS 49%) adequate time is not available for effective curriculum transaction. Teachers suggest various reasons for shortage of time include bulky syllabus, students strength, Lack of adequate time, and lack of well equipped class room.

Constraints faced by teachers in student centered curriculum transaction.

- Majority of HSS and VHSS teachers facing problems such as Lack of enough time in first year due to delay in admission. Individual differences in the class, very high strength of students, over loaded syllabus etc. in implementing student centered curriculum.

Syllabus

- HSS (78%) and VHSS (59%) teachers were demanded to restructure existing syllabus as it is over loaded (HSS teachers 63%, VHSS teachers 51%), some topics are irrelevant (HSS teachers 52%, VHSS teachers 46%), and it is not according to need and ability of students (HSS teachers 55%, VHSS teachers 51%).

Suggestions for improvement of syllabus.

- Teachers suggest modifying the syllabus by including latest information in the subjects, including life oriented topics, topics on nationalism and integration should be included.
- They also suggested arranging the contents in sequential order, rearrange according to time availability and level of learner and

exclude the irrelevant contents in the syllabus, and reduce the burden of students.

Constraints in preparation for class

- Higher secondary teachers faced various constraints in advance preparation for the class due to lack of time, work load, bulky syllabus, lack of proper method, inadequate devices for teaching, delay in distribution of textbook, lack of training in ICT, lack of knowledge in supervising projects and family bounding.

Text Book

- The analysis revealed that text books are effective for planning class room instruction (HSS teachers 67% VHSS teachers 76%), as the contents are accurate (HSS teachers 40% VHSS teachers 46%) and appropriate for acquiring the objectives (HSS teachers 63% VHSS teachers 73%), it is an efficient teaching aid (HSS teachers 54% VHSS teachers 65%) but which is of low quality of printing (HSS teachers 42% VHSS teachers 32%).
- Structure of text book also is not good (HSS teachers 63.45% VHSS teachers 65%).
- Language used in the text book is not simple (HSS teachers 61%, VHSS teachers 65%, HSS students 63%, VHSS student 71%).
- Readability of text book is at low level (HSS teachers 75% VHSS teachers 92%).
- Illustrations in the text books are not appropriate (HSS teachers 66% VHSS teachers 81%, HSS students 55%, and VHSS student 64%).

- Mechanical make up of text book is not good (HSS teachers 81% VHSS teachers 89%).
- Contents in the text book are not logically organized (HSS teachers 54% VHSS teachers 41%, HSS students 55%, and VHSS student68%).
- Hand books are not available (HSS teachers 76% VHSS teachers 65%) to majority.

Choice of text books.

- Majority of students (HSS 68.25and VHSS 70.29) selected books which were suggested by teachers.

Learning Activities

- In the HSS classes various learning activities are taken place such as discussion (HSS students 70%, VHSS Students 52%), Seminar (HSS students 74%, VHSS students 64%), assignment (HSS students 79%, VHSS students 76%), debate (HSS students 52%, VHSS students 15%), Quiz session (HSS students 8%, VHSS students 8%), self study (HSS students .84%), note writing (HSS students .7%), project (HSS students .1%).
- The major learning activities taken place in HSS classes include assignments (78.60), Seminar (73.71), Discussions (69.93), and Debate (51.61).
- In VHSS the major learning activities taken place includes assignment (75.59), Seminar (64.72), Discussion (52.52), and Debate (14.85).

Method of Teaching Adopted by Teachers

- It is found that teachers use different methods such as lecture method, lecture with AV aids, group discussion, and field visit. Most of the teachers give importance to giving notes (HSS students 89%, VHSS students 92%).
- Most of the HSS (64.83) and VHSS (56.76) teachers opined that modern technologies were available in their school and they are utilizing these advanced technologies in the class room HSS (57.24) and VHSS (43.24).

Teaching Aids used by Teachers in HSS Classes

- About half of the teachers use various audio visual aids for handling HSS classes (HSS students 56%, VHSS students 59%) such as computer, projector, TV and models. Use of projector is common in HSS schools (HSS students 43% VHSS students 41%).
- Teachers viewed that the audio visual aids except black board are inadequate. In addition to it the available teaching aids in the school include computer (HSS 72%, VHSS 62%), Projector (HSS 66%, VHSS 59%), Models (HSS 43%, VHSS 32%), film (HSS 13%, VHSS 3%), recordings (HSS 11%, VHSS 3%), photograph and pictures (HSS 2.76).

Teacher Pupil Relationship in HSS Schools

- Most of HSS students (73.01) and VHSS students (75.86) agree that good teacher pupil relation exist in their school. 82.24% of HSS students' and 83.55% of VHSS students states that teachers efficiently supervise learning activities.

Guidance and Counseling

- In the opinion of HSS (78.04) and VHSS (78.25) students most of their teachers given timely guidance to simplify learning process.
- Service of a counselor is not available in schools for solving various issues, (HSS students 58% VHSS students 48%).
- Counselor's services are availed by students from the schools having a counselor, for solving various issues like issues related to - learning, personal matters, vocational matters, and adolescent problems.

Teacher Training

- Teachers attended various in-service training courses (HSS teachers 59%, VHSS teachers 24%). But only 57.24 and 37.84 percent HSS and VHSS teachers attended various training programmes to manage adolescents. Only a low percentage HSS (27.59) and VHSS (24.32) teachers attended five days management training programme.
- Most of the teachers of HSS (69.66) and VHSS (75.68) interested to improve their professional competency by attending in-service programmes once in a year.
- Most of HSS principals (71.64) and VHSS principals (68.75) attended training programmes for improving administration capacities and majority of HSS principals (98.51%) and all VHSS principals viewed that they need more training in administration.

Areas in which training is needed to teachers.

- Teachers (HSS and VHSS) need training to improve their existing knowledge and meet the situations in schools. According to them

training is needed for updating subject knowledge, IT, innovations in teaching learning process, handling adolescent students, etc.

School Administration

- Majority of HSS teachers (76.55) and VHSS teachers (78.38) were satisfied with general discipline in school. The teachers who are not satisfied with general discipline in their school put forth certain suggestions such as provide awareness about duties and responsibilities to students, reduce teacher pupil ratio and give guidance to students for better discipline.
- Relatively small percentage of HSS principals and VHSS principals felt difficulties in solving day to day problems of schools.

Managing open school students.

- This is an area of problem only to HSS Principals. The principals (HSS 40%) are of the opinion that they face difficulties in managing open school students allotted to their schools.
- The major constraints are Lack of space and infrastructure to accommodate students, Shortage of invigilators, Lack of direct contact with students, management of open school system is not systematic, Excess students admitted in opens stream, Continuous evaluation work assessment is not scientific, Lack of time to manage a large number of students, Lack of seriousness in attending of classes and submission of work by those students, Lack of supporting staff, students were allotted not on the basis of streams functioning in the school .

Office management.

- Principals (HSS principals 60%, VHSS principals 94%) had no difficulties in preparing and submitting bills to treasury. But they face some difficulties in making correspondence with various offices. The difficulties are lack of time, drafting of letters is a difficult task, excess work load, lack of office staff- nobody is there to sent letters all are managed by one person it is difficult, lack of adequate facilities, affect teaching hours,
- Principals reported the major constraints in accessing circulars and orders. Circulars and orders are put in the portal only the last leg of time, many circulars are put in the portal at a time, due to lack of ministerial staff it is difficult to manage in time, lack of adequate time, and net work complaints also are constraints.

Day to day activities.

- Principals (HSS principals 64%, VHSS principals 44%) have no time to supervise club activities in their schools, but HSS principals (63%), VHSS principal (81%) didn't felt any difficulties in solving day today problems of schools and HSS principals (66%), VHSS principals (19%) no time to check cleanliness of school surroundings. Majority of Principals (HSS principals 87%, VHSS principals 63%) face constraints due to teaching and administration simultaneously.

PTA

- Principals (HSS principals 87%, VHSS principals 94%) didn't feel any kind of difficulty in the functioning of PTA in their schools. Principals (HSS principals 69%) have enough time to arrange PTA general body meeting and PTA executive meetings (HSS principal75%).

- Principals (HSS principals 87%, VHSS principals 75%) are satisfied with the functioning of PTA in their schools and only (HSS principals 5.97%, VHSS principals 13%) are of the opinion that they have difficulties in implementing the decisions taken by PTA.
- Majority of HSS teachers (80.69) and VHSS teachers (86.49) were opined that functioning of PTA is satisfactory
- Most of the HSS (68.97) and VHSS (75.68) teachers were satisfied with functioning of PTA. Majority of them state that PTA support various activities of school.
- PTA supports various activities of school (HSS teachers 79%, VHSS teachers 84%).
- Teachers opined that PTA is not properly involved in improving the facilities in school (laboratory, equipment, etc).
- It is concluded that 86.57% HSS principals and 75% VHSS principals are satisfied with the working of PTA in their schools and only 5.97 HSS principals and 12.5%VHSS principals are of the opinion that they have difficulties in implementing the decisions suggested by PTA.

Other Activities

- HSS teachers opined that various clubs perform efficiently in HSS and VHSS schools in Kerala.

Effectiveness of New Time Schedule in HSS Schools

- Only few students (28.39), many principals (46.27), and nearly half of the teachers (49.66) favored the new time schedule followed in HSS schools.

Difficulties due to new time schedule.

- A. Principals reported various difficulties in the new time schedule such as lack of interval time, long working time, students strain due to packed time table, lack of concentration, and parent's anxiety due to late arrival of students.
- Students felt various difficulties in the new time schedule such as fed up due to continuous class (55%). 46.15% viewed that time to satisfy primary needs is inadequate, time schedule create traveling problem (50%), lack of enough interval and lunch time (2%), create mental and physical strain (2%), Unable to concentrate in the last period(3%) no time for relaxation (1%), Local issues such as, school is situated in forest area, and serious problems are faced due to wild animals(.8%).
 - Students utilise Saturday for various purposes such as organizing the study activities of the whole week(40%), for attending tuition class (30%), doing job (17%), utilizing library facilities (7%), attending ASAP course (6%), for relaxation (5%).
 - Principals (HSS principals 54%) agreed that the new time schedule is not effective.

Duties Other than academic work.

- In addition to teaching a number of other duties were performed by the HSS teachers like coordinator of various clubs, admission, principal in charge etc.
- In addition to teaching teachers in VHSS performed a number of other duties like coordinator of NSS, agriculture club, vegetable garden, help

desk, On Job training, Production cum training service, vijayasree, principal duty etc.

Organisation and utilization of various training programmes to students.

In the opinion of HSS (42.52) and VHSS (55.44) students various training programmes were organized in their school to get knowledge about procuring of job. Majority of them opined that these programmes benefited to them.

ASAP

- Only a small percentage of students joined in ASAP. Out of forty four students forty students agreed that ASAP course facilitated attainment of skill. Some students opined that it creates learning burden.
- The main defects reported by the ASAP participants include lack of efficient trainers, difficult to study and attend the course at a time, and they suggest to provide courses which are benefited to them in higher studies.

Attendance

Most of the HSS (87.59) and VHSS (94.95) teachers agreed that students attend the class in time. Teachers (HSS teacher 92%, VHSS teachers 97%) mark attendance regularly. Only some teachers reported (HSS teachers 13.10%, VHSS teachers 3%) that there were irregularity problems.

Individual Attention

- Majority of HSS (71.03) and VHSS (75.68) teachers were able to give individual attention. According to them (HSS -76.55) and VHSS (54.05)

teachers existing teacher pupil ratio hinder for giving individual attention.

- Teachers (HSS teachers 88.28%, VHSS teachers 97%) repeated difficult portions in the class.
- Teachers adopt various measures to handle below average students such as repeat difficult portions (HSS teacher 75%, VHSS teachers 57%), provide remedial teaching (HSS teacher 59%, VHSS teachers 54%), motivation/reward when complete the task in time (HSS teacher 52%, VHSS teachers 43%), give extra time (HSS teacher 45%, VHSS teachers 32%), try to involve them in main stream activity (HSS teacher 48%, VHSS teachers 38%), form groups with leader (HSS teacher .7%), give mental exercises (HSS teacher .7%).
- Teachers adopt various measures to handle gifted students such as; giving enrichment activities (HSS teacher 57%, VHSS teachers 49%), encouraged to participate in extracurricular activities (HSS teacher 56%, VHSS teachers 35%), Assign different tasks (HSS teacher 44%, VHSS teachers 46%), conduct academic contests (HSS teacher 37%, VHSS teachers 27%), allow open forums and debate in the class (HSS teacher 34%, VHSS teachers 27%), assign independent projects (HSS teacher 28%, VHSS teacher 27%), publishing of magazines/wall magazines (HSS teacher .7%), question papers discussion (HSS teacher .7%).

Availability of Teachers

- Students opined that teachers are available for handling all subjects (HSS teachers 91%, VHSS teachers 88%).

- Teachers give correct and timely guidance on academic matters (HSS students 86%, VHSS students 84%) Co curricular aspects, (HSS students 37%, VHSS students 32%). Some teachers give guidance on social aspects, discipline and for sports and games.

Single Window Admission

- Principals (HSS principals 67%, VHSS principals 44%) viewed that single window admission procedure is a tedious task. Out of 39 HSS principals 24 agreed that continuous and prolonged admission process affects academic and administrative aspects.
- The major problems in single window admission process perceived by VHSS principals are:-With regard to data entry, admission process takes long time in VHSS department, admission and transfer of students over a period of time makes admission a tedious task. They suggested that, allotment and admission process should be completed as early as possible. Now it is a long term process, Single window is a very good process but difficulties arise when there are so many allotments, transfer etc, the allotment and transfer should be minimized. The admission process should be completed before June and classes should be started by June 15th itself.

Course Selection

- Majority of Students (HSS students 94%, VHSS students 76%) are getting admission to the course of their choice.
- Most of the students (HSS 93%, VHSS 89%) are interested to take higher education in the same subject.

- Majority of VHSS students (89%) believed that higher education opportunities are high in the vocational course in which they are studying and Most of them (94%) perceived that vocational education helps to attain the vocational aim of life.

Reasons for choosing vocational course

- VHSS students pointed out ten motivating factors for selecting VHSS course such as; courses are more beneficial to them (72.15) useful to get job (61.8). because of getting admission in nearby school (11.94), admission for HSS was not possible (10.08), parents interest (5.31), like field work (.5), interest (1.06), study vocational subject and higher secondary subjects at a time (.27), and up to SSLC studied in technical high school (.27).

Future Intention of VHSS Students

- A number of future intentions suggested by VHSS students such as higher education in the same vocational area, seek appointment in the competent area, join for degree course, preparing for entrance, join in other areas, join for B Ed programme, etc.
- It is found out that low percentage of VHSS students (16.45) are not interested to join in the trained skill sector after completion of VHSS due to lack of interest in the field (38), adequate vocational training is not received (21), Lack of social acceptability of the course (14), Out dated course (9), lack of employment opportunity in the vocational area (5), and interested in other areas (2).

Medium of instruction.

Students (HSS 35%, VHSS 55%) faced difficulties due to change in medium of instruction from the secondary level.

Status of VHSS courses as perceived by teachers.

- In the opinion of 59.46% VHSS teachers, students selected VHSS as their last option. They also agreed that students had a misconception that HSS courses are superior. Majority of teachers (78.38) agreed that vocational courses have regional practical significance. In the opinion of 51.35% teachers there is a need to introduce innovative courses.
- Some of the vocational teachers (21.62) claimed that certain courses are outdated.
- Majority of teachers (62.16) agreed that industries and other skill providers' co operate with the training programmes.
- Some teachers (24.32) commended that introduction of ASAP negatively affect VHSS. Only 35.14% satisfied with the working of VHSS teachers association.
- Most of the vocational teachers (62.16) viewed that management of DVHSE is effective.

Suggestions given by the Principals, Teachers, and Students for Improvement of Higher Secondary Education

Suggestions of HSS principals.

To strengthen the HSS education the following suggestions are made by HSS principals:-

Work load.

- Principal post should be converted as non teaching or reduce teaching load of principals, and appoint adequate non teaching staff.

Evaluation.

- Abolish SAY & improvement examinations and its valuation camp. Stop double valuation for science subjects

Administration.

- Reduce teacher-pupil ratio, Ensure teacher pupil direct contact, Provide moral class & allot one period for the same, Appoint efficient permanent teachers, Limit the duration of the admission process, Set district offices for HSS, Provide physical training to HSST, All transfers should be completed before the beginning of the academic year, Distribute fund in time, Don't allow working days for other activities/meetings, Reduce work load by reducing subjects as three (as in Pre-degree course) instead of four. Supply registers, forms and stationary items to school, Appoint efficient lab assistants, Dress code to teachers, Need proper planning of activities. Government should take initiatives to improve HSS education, Avoid irresponsibility of directorate and officers and need sincere officials in higher posts, Provide adequate government aid to school, Quality improvement is needed, Take speedy actions to give approval of appointment, seniority etc, Coordinate activities in unaided sector. Need more involvement of authorities in

curricular and administrative matters, Avoid political domination, Need more transparency clear guidelines and effective vision, Avoid single window system & permit students to apply for admission in any school,

Working time.

- Saturday holiday to principal, Re arrange time schedule, Set teaching time 9AM to 3 PM, and utilise 3PM to 4.30 for co curricular activities,

Facilities.

- Provide adequate facilities, Provide separate computer for HSS, Appoint physical education teachers, Provide all services like counseling, health checkup etc to students

Curriculum.

- Syllabus & curriculum must suit the needs of academic community/ need modification, Include more time for extracurricular activities, Syllabus of all subjects should match with that of CBSE.

Professional empowerment.

- Provide orientation/refresher classes to teachers to make them able to handle advanced courses, Equip principal/ one or two senior teachers with administration and official work, Prefer one day management training course for total staff of one school/each school in the presence of authority, Provide e mat training to principals as soon as possible.

Suggestion of the HSS teachers for the improvement of system.

The important suggestions of HSS teachers include restructuring of curriculum, change the time schedule for HSS, provide timely training to teachers, distribute hand book & text book in time, provide adequate facilities, proper administration of system, avoid grace mark to students, avoid delay in plus one allotment process, reduce teacher pupil ratio, separate PTA for HSS, reduce the work load of teachers, and exempt principal from teaching.

Suggestion of the HSS students for the improvement of system.

HSS humanities students.

According to HSS humanities students the important issues are

Anxiety about future. Lack of higher studies option & employment, restrict IAS, LLB to humanities,

Administrative issues like-Avoid grace mark, stop IED students pass system and scholarship, late admission affect classes, lack of availability of text book in time, New time schedule create various problems- interval time - not sufficient, continuous holiday affect class, Provide 1 hour for IT, No importance to arts and sports, introduce NCC, JRC, SPC, ASAP course-not available, dumping of IED students to humanities, More than 1 hour for 1 subject daily is a problem, Conduct unit test, sports team selection was done from some school only, stop the use of mobile, control drug use, more contents in the syllabus, and provide vocational training introduce club activities in unaided schools, unaided teachers lack training, collect regular feedback from students about the functioning of course.

Co-curricular issues include lack of encouragement of arts programmes.

Text book issues like - History text book tough and no specific order for contents in plus two history text book.

Issues related to Discriminations such as - Stop comparison with science, exempted science students from cleaning, Lack of friendly atmosphere compared to high school.

Issues related to facilities.

No calm environment as in city, PT teacher give importance to athletics only, Lack of adequate toilets, No proper class room, Improve infrastructure- shelf, lack of ground, in second language classes faced problems due to lack of seating arrangements, Leaky roof, lack of library, No adequate water supply in school, Need counselor, No arrangements for waste disposal.

Teacher related problems.

Unnecessary explanation – history boring so change teaching style, faced various physical and mental strains from teachers, Teachers from other districts cause cultural problems, lack of friendly atmosphere, Lack of experienced teachers, unnecessary threatening, Personal harassment, Teachers must be student centered. Provide training to teachers in English. Give importance to understanding concepts, change the negative attitude of teachers.

HSS science students.

According to science students the major difficulties and suggestions are related with teacher, new time schedule, facilities, administration,

guidance, learning, medium of instruction, curriculum, text book, mental strain, and antisocial activities.

Issues related with teacher. Fear of chemistry teacher, Change the wrong attitude of teachers, Harsh punishments, Incomplete portions, No sincere classes, change teachers attitude (responsibility) provide motivation & training to teachers, lack of proper notes, spent time for unwanted talks by some teachers, Teacher use wrong words, appoint committee for evaluating teachers & take action, control politics of teachers/principal, unnecessary special classes, teachers give important topics as seminar, so it is difficult to understand, some teachers lack sincerity which hinder completion of portions,

Issues related with the new time schedule . New time schedule change, insufficient interval time, Transportation problem, Continuous leave of principal (Zoology teacher)-miss zoology class, lab works are pending, no model teachers, fashionable, Lack of adequate lunch time and interval time, continuous periods for same subject,

Issues related with facilities. Improve the condition of lab, No sick room, improve the condition of class room, lack of library facility, big library but not utilized, Lack of proper water supply, Lack toilet facility and it creates various diseases, No drinking water, Provide 1 hour for IT, No adequate infrastructure, Lack of physical training affect health, so provide one hour, Fear of teachers to clear doubts, new building, plumbing, wiring works not completed, library big but not used till today, second languages such as Hindi, Sanskrit, not in our school so provide these, lack of play ground, require a school canteen.

Issues related with Administration- Avoid grace mark, Non availability of practical, implement hourly basis timetable, order of subjects in time table is improper so re arrange the time table. No proper time table, stop the delay in plus one admission, Lack of lady teachers for supervising sports and games. Delayed admission causes lack of time and it create problems in public exam, Lack of friendly atmosphere as compared to high school, lack of motivation to arts/sports, Conduct PTA regularly, Lack assembly, Collecting huge amount for arts/sports, need more club activities, co education is needed, Partiality in selecting to NSS, lack school assembly, transfer of teachers create incomplete portions, introduce NSS/Thanalkoottu, free entrance coaching to poor students, stop the mobile use of teachers, ensure good teacher pupil relation, lack of ASAP course, lack of efficient working of clubs, appoint cleaning staff, science fair not conducted efficiently, lack motivation for arts and sports,

Issues related with guidance. No guidance about higher studies given.

Issues related with learning. More record work, CBSE students score high mark in English without spending effort and time, forced to depend on tuition, science students need to spent more time for subject study due to English medium, it create problems & loss of time it also affect entrance result back.

Issues related with medium of instruction. Change the teaching & learning of English at LP, UP HS section then only English shall be easier at higher secondary.

Issues related with Evaluation. Conduct unit tests regularly, strict valuation is needed, English valuation tough and we got less mark, no question paper discussion.

Issues related with curriculum. More contents to study, use AV aids.

Issues related with Text book. HSS follows NCERT text book- it lack simplicity- language problem, change class to NCERT base, reduce contents in text, arrange contents & avoid unnecessary descriptions, reduce weight of book, lack of availability of text book in time, Distribute text book in time, simplify text books.

Issues related with mental strain. More home work/tuition & school-stress, record work create problem,

Issues related with Control of anti social activities. Take action against drug use, control anti social- drug distribution, give guidance to students- effect of drugs, use of mobile phone etc

HSS commerce students.

According to HSS commerce students the important issues are

Related with new time schedule. In new time schedule there is continuous classes leads to tiredness, More than 1 hour for 1 subject – problem, Early starting of class compel to take hotel food, Late arrival & punishment (out of class-1 period) early starting without consider reasons – reorganise time, it create mental strain, We face transportation problems to reach school early, Lack of free time for clearing doubts, difficulty to study accountancy /economics.

Related with Co curricular activities. Lack of motivation for arts & sports.

Related with Administration. ASAP course is not available, consider students opinion in functioning, lack of friendly atmosphere/in HSS as

compared to high school, Continuous transfer & change of teachers affect our learning, provide grace mark to thanalkoottu, give English orientation class, avoid special classes on Saturdays it affect our study, introduce screening in the class, Stop the cleaning of toilets by students, conduct various programmes to exhibit skills, Create awareness about importance of plus two, Control the anti social activities and other drug uses, Introduce job oriented courses, Introduce NCC, SPC,JRC, Different admission fee charged (aided schools), there is discrimination in the selection process of students in NSS, give career class,

Related with Evaluation. Conduct unit tests regularly.

Teaching and teacher related issues. Saturday special classes & it create learning burden, Change the wrong attitude of teachers, Some classes were not understand, teachers lack knowledge in language, change the teaching learning style, teachers must be student friendly, use AV aids for teaching, teachers are not punctual, no sincere classes, Teacher use wrong words and change their behavior & give training, Introduce dress code to teachers, Teachers favourism create problem, speedy classes, economics tough to study.

Related with Facilities. Improve the overall facilities- class room, Improve the condition of computer lab & computer, No PT teacher, No counselor, lack of adequate toilet facility leads to various diseases, provide library facility, improve the condition of roof, need canteen facility, improve infrastructure, lack of water in bath room, lack of store.

Related to Textbook. Delayed distribution of text books, Introduce text book in Malayalam, Reduce contents in text.

Related to Individual attention. Lack individual attention, no proper student teacher relations.

Suggestions of principals, teachers and students of VHSE for improvement of the system.

Suggestions of VHSS principals.

To strengthen the VHS education the following suggestions are made by VHSS principals:-

- Have to combine/ merge the HSS and VHSS sections to empower the HSS stream in Kerala state.
- Avoid insufficient uniformity in different posts
- Introduce advanced courses and eliminate outdated courses from curriculum
- When the post of clerk become vacant it is very difficult to work as institution head, office head, and teacher simultaneously.
- Twenty four teaching hours and duties of principal is really hard
- Due to lack of office staff forced to miss so many classes.

Suggestions of VHSS teachers.

The important suggestion given by VHSS teachers include revise the vocational syllabus regularly, provide training to meet the needs of VHSS, improve the facilities in school, improve the institute industry interaction, take steps to equalize HSS and VHSS, reduce teacher pupil ratio, introduce innovative courses, give reservation to students for higher studies in the

concerned vocational subject, and marks of vocational subject, GFC should be considered for degree.

Suggestions by VHSS students.

VHSS (MLT) (Group B- Branch 3 Allied health care). students pointed out various problems due to lack of facilities (Laboratory, Bell, Toilet, and Library), more number of students in a class, lack physical education teacher and counselor services, limit the working days in to five, limit the plus one admission process and delay in supplementary allotments, lack of adequate vocational guidance, reduce the biology content, lack of higher studies option (wayanad), change the teaching style and attitude of teachers, appoint efficient teachers, eliminate the discrimination between HSS and VHSS students, face difficulties due to lack of field work facility in hospitals, include maths in syllabus, and modify the course according to advanced technology.

VHSS animal husbandry (Group B-Branch 4-Animal husbandry-) students reported various difficulties such as lack of facilities (Laboratory, toilet, library,), lack of individual practice opportunity, more students in class, lack of computer education, lack of physical education teacher and PT period in time table, limit the working days in to five, limit the plus one admission process, change the learning style, orientation at high school level is needed about HSS, reduce the content in syllabus, lack of higher studies option, change the wrong attitude towards VHSS students.

According to *VHSS Agricultural science and processing Technology* (Group B- Branch 2- Agriculture) the major difficulties faced by students

include lack of facilities (toilet, laboratory, ground,) lack of field work, more students in a class, lack of physical education teacher and counselor, delay in the distribution of text book, lack of innovative courses, boring due to continuous class, lack of good learning style, lack of interval time, lack of orientation at high school level, reduce irrelevant contents, lack of higher studies option, and change the wrong attitude of teachers.

According to *VHSS Agriculture-Crop health management* students, the major problems faced by students include lack of facilities (toilet, laboratory, ground,) lack of field work, lack of innovative courses, limit the working days in to five, boring due to continuous class, lack of interval time, avoid unnecessary/ silly topics, lack of higher studies opportunities and confusion about future, lack of practical knowledge, discrimination between HSS and VHSS, lack efficient teachers, avoid insects collection from syllabus, lack of innovative courses, and change the wrong attitude of teachers.

VHSS Graphic Design and Printing Technology (Group A Branch 1 Engineering) students reported various problems such as lack of facilities (toilet, water, Physical training,), limit the working days in to five, in Saturday most of the teachers were absent, wrong attitude of teachers, appoint efficient teachers, damaged printing machine, only NSS is working in VHSS, discrimination between HSS and VHSS.

VHSS Computer science Information Technology (Group A Branch 1 Engineering) students reported difficulties such as lack of facilities (building, laboratory, toilet, water, PT), teachers leave on Saturdays affect classes, use of drugs by students, teachers irregularity, continuous transfer, lack of efficient

teachers (not able to solve simple issues), discrimination between HSS and VHSS, career slate not working, limit the working days in to five, ED text books are not available at the time of exam, learning burden, lack of field experience, improve the reputation of VHSS, first year computer syllabus good, now no need of c++, lack of guidance, lack of job oriented training.

VHSS Travel and Tourism (Group C Branch 7 Humanities) students suggest avoiding Saturday from working day, and simplifying exam.

VHSS accounting and taxation (Group D Branch 8 Business & Commerce) students reported Avoid Saturday class, Toilet distant place avoid discrimination between VHS & HSS, Saturday bathroom not opened, no importance to Physical education, need change in teachers attitude, not allowed to participate in activities compared to HSS section, admission to higher studies difficult, teachers absent on Saturdays, continuous class by a teacher boring, no imp to vocational training, introduce new courses, EDP & VT not valued at the time of higher studies, bad teacher pupil relation, not considering low achievers problems.

VHSS Marine Fisheries and Sea food Processing (Group B Branch 5- Fisheries) students reported difficulties such as lack computer lab, lack of facilities (library, permanent building and class room, laboratory, play ground, tidy bath room,) disturbance from harbor, lack of neat school surroundings, Travelling problems due to travelling by (jankar/railway gate) not considered by teachers.

VHSS Automobile technology (Group A- Branch 1 Engineering) students reported various difficulties such as continuous transfer of teachers

weaken the system, language problem due to teachers from various districts, lack of adequate number of courses in schools, eliminate Saturday from working day, no importance to sports, lack of adequate facilities such as (more students, no advance laboratory, no permanent building, inadequate toilet facilities, only one vehicle, 2 permanent teachers, total three rooms used for plus one class, plus two class, and teachers/office/principal room), continuous class boring (8.30-4PM), lack of freedom, 15 days OJT leads to printed notes

According to *VHSS civil construction technology* (Group A Branch 1 Engineering)students the major problems include limit the working days in to five, lack of vocation oriented course, interest is not considering at the time of admission, discrimination between HSS and VHSS.

Summary of Major Findings

Based on the research findings obtained by analyzing the documents and the data through various methods, the major findings can be summarized as follows.

Growth, Structure, Courses and Development of Higher Secondary Education in Kerala

Higher secondary education was started in the state in 1990 as an initiative to abolish pre-degree course in the colleges during the academic year 1990-91 as per GO (MS)No: 91/90/GI Edn.Dt:23/05/1990 by starting higher secondary classes in the selected government schools in the state of Kerala. It was specified in the government order that the scheme will be extended stage by stage to other high schools in the state after watching the

progress of plus two education for one year. Higher secondary students have to study 6 subjects. English language is compulsory with any one of the second languages offered for HSS courses such as Malayalam, Hindi, Arabic, Sanskrit, Tamil, Urdu, Kannada, Syria, French, Russian, Latin and German and a combination of four subjects, depending on the stream selected. In the initial stage, textbooks as per the Pre-degree syllabus of Calicut University and some of the NCERT textbooks were used for HSS Education. Now the HSS education in Kerala provides 35 course combinations.

As per GO (MS) No 138/90/G Edn Dt: 27/06/1990 Government had introduced HSS course in thirty one Government high school belonging to 31 educational districts of the state with effect from the academic year 1990-91 by allotting science group with physics chemistry Maths and biology combination to sixteen schools and Humanities group with history geography, economics and political science combination to fifteen schools.

In Kerala, HSS education is now functioning under government, aided and unaided schools. As per the records of the Directorate of HSS education, there were 2073 HSS schools in 2016 in Kerala. Out of these 833 (40.18%) are Government school, 854 (41.2%) are aided schools and the remaining 386 (18.62%) are unaided and technical school. There are 7248 batches of HSS classes in 2016 with an enrollment of 383582 students.

HSS education in Kerala offers courses in three streams namely, science, humanities, and commerce. Directorate of HSS Education conducts the various HSS examinations for students of Open School, Technical Schools, Kalamandalam Arts School, Schools in Lakshadweep, Mahe and Gulf Countries along with the students of the higher secondary schools in Kerala.

Growth, Structure Courses and Development of VHS Education in Kerala

VHSE was introduced in the state in the academic year 1983-84 in 19 Government High Schools. VHSE in the state imparts education at plus two level aiming to achieve self/wages/direct employment as well as vertical mobility. The course was designed to prepare skilled work force at middle level in one group or more of occupations, trade or job after matriculation at 10+2 stage of education.

Courses in 35 subjects are available in VHSE for students. English language is compulsory with any one of the second languages offered for HSS courses such as Malayalam, Hindi, Arabic, Sanskrit, Tamil, Urdu, Kannada, Syriac, French, Russian, Latin and German and a combination of four subjects, depending on the stream selected.

As per G.O(MS)No. 102/2015/Gl.Edn. Dtd.07.05.2015 there was 35 courses in 2015-16 onwards. The courses are divided in to four groups named Group A, Group B, Group C, and Group D. There are 10 trades (courses) under Engineering, 3 under Agriculture, 7 under Allied health care, 2 under Animal Husbandry, 3 under Fisheries, 3 under home science, 1 under humanities and 6 under Business and Commerce. In Kerala, there are VHSS education functioning under government and aided schools.

VHS education was introduced in 19 schools with a few selected courses and was extended to 73 schools in 1985-86 by offering 27 different vocational courses. In 1988-89 there were 100 schools with a total of 200 batches (sections). The VHSS education programme continued to expand

every year until 1995-96 and the number of schools went up to 310 with a total of 814 sections offering 45 different courses. The next expansion came in 2000-01 and the number of schools went up to 375 with a total of 1000 batches. With the last expansion in 2006-07, at present, there are 389 schools with 1100 batches in the state imparting VHSS Education in 35 courses.

Directorate of vocational higher secondary education conducts two year VHS course at higher secondary level in Kerala. The structure of vocational courses consisted of three parts. Part one and part two are compulsory to all VHSS students.

Facilities in the Institution

The higher secondary schools of Kerala, though expanded rapidly, the needed facilities are lacking in many HSS and VHS schools in Kerala. Many schools run classes in poor facility class rooms and furniture, laboratories, library, building, toilets, playground, etc. School location is not easily accessible to students and teachers for some schools. Accommodation for higher secondary students, office room, staff room, principal room, store room, laboratories, students rest room, toilets etc are not sufficient and convenient in addition to this open school students also are allotted to higher secondary schools, sometimes not even considering the course combination sanctioned for the schools.

Administration

The level of administration for HSE and VHSE are almost similar. There is a directorate at state level such as DHSE and DVHSE. There are regional directorates for both HSE and VHSE. At school level the principal

hold the key position of teaching, administration and supervision without adequate number of office staff. Everything in the school, such as planning, organizing, directing, controlling, coordinating, reporting and budgeting of various elements of schools are managed by principal. Administration at higher secondary level is mostly through e-governance managed through the web portal developed for this purpose.

Admission

The process of admission is managed through a statewide centralized admission process. Though the allotment is done online, somany manual works are there in relation to the process starting from receiving application, correction of errors, arranging help desk, admission of students as per allotment, entry in registers as per admission, issue of transfer and its entry in further allotment, etc. The admission process is usually finished by the end of the first term.

Time Schedule & Working Days

HSS follows five day week pattern since 2016 with a time schedule of 9. Am to 4.45 pm., and VHSS follows six day week pattern. Mixed responses are received from principals, teachers, and students regarding the time schedule in HSS schools. But those of VHSE demanded for exempting Saturday from being a working day.

Courses

Six subject pattern is followed in HSS including four subjects and two languages. But in VHSE, there is only one language, additional vocational subject is in place. There are three streams such as Science, Commerce, and

Humanities in HSE, with some options given for the subject combination and in providing second language on the basis of the approval by the DHSE. There are 35 different courses run by VHSE, usually one or two vocational subjects in a school. Though VHSE has marked advantage in terms of vocational subject, students, teachers and principals of VHSE viewed that VHSE should be merged with HSE, as the former is considered as second to VHSE.

Curriculum

The curriculum for HSE and VHSE are common for the same subjects. There is a demand for periodic curriculum revision due to bulky syllabus, irrelevant topics, inclusion of recent developments in various subjects, removes outdated courses especially in VHSE, more number of papers when compared to CBSE, etc. The medium of instruction is English in both HSS & VHSS. Teacher- student ratio in both systems are very high when compared to secondary and other lower levels, which is a great concern in terms of quality curriculum transaction as perceived by teachers and students. Though computer education available for all students at secondary level, that facility is restricted to those students have computer as a subject of study in HSE or VHSE.

There are various clubs, programmes and activities for enriching curriculum such as NSS, NCC, ASAP, counseling cell, etc.

Textbooks

Prescribed texts are followed in both HSE & VHSE systems. The textbook quality and its timely availability is a great concern for students as well as teachers in HSE & VHSE. The quality in terms of physical features,

presentation aspects, content, and level of difficulty are considered as low by teachers and students.

Evaluation

Both continuous and terminal evaluation is in practice, with public examination at the end of first and second year of HSE & VHSE. The procedure of evaluation is common by following the guidelines issued by SCERT Kerala. Unit tests are the main aspect of continuous evaluation. There are public examinations at the end of each year as well as SAY/Improvement examination. Valuation of scripts are done at centralised valuation camps, the camp of year end examination during summer vacation and that of SAY examination during working days. There is double valuation for science subject. Both teachers and principals expressed various issues related to the process of evaluation.

Students

Students of all categories are admitted to both the systems. Students' attendance emerges as a matter of great concern; teachers were able to give individual attention also repeated difficult portions in the class. The high teacher pupil ratio in higher secondary level creates hindrance for giving individual attention. Though teachers provide guidance in academic and other matters, students demand a separate counselor for the school. Students also viewed that physical education is not available for them.

Teachers

There are two main category of teachers in higher secondary level in Kerala such as Senior teachers and Junior teachers, categorized on the basis of workload. There is no difference with respect to qualification requirements for both of the categories. But junior teachers with less workload and less

paid. The prescribed qualification for a higher secondary level teacher is post graduation with bachelor degree in education and a pass in state level eligibility test or equivalent. There are subject and language teachers. The workload of teachers can't be properly accounted as they have to perform various other academic and administrative duties in relation with admission, examination, co-curricular activities, clubs and other day to day activities of the school. Both centralized valuation camps and single window admission process is comparatively very lengthy when compared to secondary level education, in which teachers play a very significant role.

Principal

The post of principal in higher secondary level is that of a teaching principal. Principal has to teach a same period which is required to teach by a higher secondary senior teacher. Hence, it creates many administrative and academic problems. The principal has to play three roles at a time such as a teacher, administrator and institution head, which is not in practice in any level of educational institutions. The posting of principal is on seniority basis. If a principal of a particular subject posted to a school, the senior teacher should be considered as thrown out and mandatorily transferred to any school where vacancy for the subject exists.

Teacher Training

Both pre-service and in-service training are found inadequate to teachers as well as principals, as the existing training programmes are not aimed at adolescent learners with respect to teaching, and administrative training is very limited with respect to principals. There are demands for technology mediated training by teachers and principals for capacity building as most of them are interested in professional development.

Parent Teacher Association

Parent teachers Association is constituted in all the schools. These associations have shown interest in school activities. Only a few principals faced problems in implementing the PTA's decisions due to the conflicts between high school and higher secondary in implementing various decision as well as unnecessary intervention of PTA members.

Problems / Issues

High teacher-student ratio, lack of infrastructure facilities, bulky syllabus, conduct of various programmes and activities, lack of time for relaxation including in vacation, prolonged admission process, etc. are major problems common for both HSE and VHSE.

Principals reported various constraints in accessing circulars and orders due to many problems. The existing practice of teaching principal should be abolished. Transfer of teachers and principal in the middle of the academic year also is viewed as a serious problem. The discrimination of teachers such as junior and senior also is an unresolved problem.

The major constraints are in evaluation felt by the higher secondary teachers in student's performance include on the spot evaluation of group work, evaluation of home work in time, evaluation of project, seminar, discussion, observation and evaluation of social values. Teachers have to perform various duties other than that of teaching, which adversely affect their preparation for classes. Utilization of library is inadequate in most of the schools as there is no separate librarian and reading room facilities.

Conclusion

Higher secondary education in Kerala has been progressing rapidly. In Kerala, the two major streams for post secondary education at school level are Higher Secondary (HSS), under directorate of Higher Secondary Education and VHSS under the Directorate of Vocational Higher Secondary Education. Higher Secondary Education in Kerala offers courses in three streams namely Science, Humanities and Commerce. Vocational Higher Secondary education offers various vocational courses under four groups such as Group A, Group B, Group C, and Group D since 1983-84 even before the establishment of higher secondary education. The number of vocational courses offered was 35 since 2015-16. Though the courses under VHSE were advanced in terms of vocational subjects, higher secondary education system is more developed in terms of number of schools and number of students. The status of the plus two stage of education can be measured from the academic functioning and achievements.

School infrastructure and environment are important factors in enhancing learning and contribute to the quality of education. The study revealed that the higher secondary schools though expanded in number rapidly but the needed facilities are inadequate. Under the modern system of education all types of facilities have unique importance. i.e., the academic functioning of higher secondary education depends on the efficacy of administration, quality of teachers and other academic aspects such as curriculum, examination system, co curricular activities, teaching methods, guidance and counseling, learning resources, etc.

Efficient academic atmosphere in a school cannot be created without adequate facilities. The present status of infrastructural facilities in HSS and VHSS of Kerala was inadequate. Enrolment of students increasing year after year and the government increases the number of seats in each batch in the form of marginal increase of 20 % seats, so as to increase the class strength of 60, in secondary it was only 40. Many schools were located in places which were not easily accessible to students and teachers. Infrastructural facilities such as building, laboratory, library, toilets especially girls friendly toilets were inadequate in many schools.

Evaluation is an integral part of an education system. The existing system of evaluation at higher secondary level is not sound and needs to be reformed. Progress in education is associated with the innovations in communication media in teaching learning process. Quality of teaching and achievement in education influenced by effectiveness of media and technology used for curriculum transaction. It is found that teachers uses different methods and they gave importance in dictating notes. The availability of teaching aids especially technological facilities are inadequate in most of the HSS and VHSS.

The success of education system depends upon how well the institutions are stuffed with qualified and trained teachers. Teachers were interested to improve their competencies by attending training programmes. Effective training programmes for teachers and principals are required for their capacity building. The study revealed that teachers do not get adequate pre service or inservice training for managing adolescents.

Government initiatives to train the teachers of higher secondary system in Kerala for the management of adolescents were insufficient. The

authorities of HSE and VHSE need to work intensively to train the teachers with due regard to learner and teacher needs by using improved training methodologies. The training programme should include activity oriented and needed a systematic follow up of the programme.

At higher secondary level administration the principal hold the key functions of teaching, administration and supervision without adequate number of staffs. Principal is very busy person to perform multiple roles such as a teacher, administrator and institutional head simultaneously.

Students progress and achievement is considered as the yardstick in the functioning of the school. After the implementation of grading system (2005-06) the pass percentage of higher secondary students are showing an increase to above 70% every year.

Very high teacher-student ratio, make it impossible to practice learner/activity oriented curriculum transaction as well as in continuous and comprehensive evaluation. Admission process to first year HSE and VHSE is a prolonged process and may extend up to the end of august or to the end of first term. Together with this various programmes in schools reduces the working days available for first year classes considerably.

Distribution of textbooks in time, low quality of content and structure of textbooks, availability of handbooks and resource materials, resource rooms, ICT facilities are inadequate in many schools. Hourly time table is not followed. Hence, repetition of same subject on the same day or continuous periods for same subjects is in practice.

Teachers also face discrimination, though possessing same qualification, there exists discrimination as senior and junior on the basis of number of

periods of instruction and pay scale. Most interesting aspect is that junior service is not counted for promotion to the post of Principal, but service at secondary school level is counted for the same.

Though VHSE is advantageous to that of HSE, students prefer the later due to some social stigma and think that VHSE is inferior to HSE. More over in HSE students of humanities and commerce stream viewed that science students received more attention from teachers.

Educational Implications

Based on the conclusions of the present critical inquiry the following practical suggestions have been worked out to improve the HSS education system in Kerala.

Though the state had noticed a widespread expansion in higher secondary education system, it is less in the case of VHSE. Hence, government should develop a policy and set of regulations on higher secondary level education in the state.

Centralised Admission Process should be reviewed to eliminate the problems in the process. The system should be designed in a more student friendly nature, and complete the process of allotment by the first week of June.

Teacher – student ratio is very high as the strength is normally fifty in a class and an increase of twenty percent or more seats are allowed by the government every year. This should adversely affect the quality of higher secondary education.

Reduce number of subjects of study at higher secondary level by providing facility of option as in CBSE. A vocational subject can be made available for students under HSE also.

State level common awareness programme should be arranged for students who seek admission for higher secondary level courses along with their parents in their respective schools of study for secondary education, immediately after the publication of SSLC result.

Both pre-service and in-service training should be strengthened by incorporating principles for managing adolescents. A web portal should be developed and resource materials for teaching of various subjects should be uploaded in the portal.

A unified online in-service training programme for the state should be designed, so that to avoid loss of teaching days / holidays of teachers. Thus teachers shall utilize the facility at any point of time it is required.

Deliberate efforts have to be made by government, policy makers, educationists and researchers to make the higher secondary education system more effective since it acts as a link between school education and higher education

A flexible curriculum for the higher secondary and vocational higher secondary should be prepared by re orienting the existing curricula based on norms standards needs and abilities of the society.

There should be a systematic governmental monitoring and control to ensure smooth and efficient functioning of the HSE and VHSE streams

Librarian, office staff and Physical education teachers may be appointed in the HSS and VHSS schools in Kerala.

The minimum requirements of basic facilities such as building, laboratories, play ground, teaching and laboratory equipments, should be provided for the institutions of higher secondary education.

Scarcities like safe drinking water, hygiene toilets, need to be addressed.

The normal classes of school should not be disturbed by cancelling of classes for other activities and programmes.

Transfer of teachers should be stopped except in unavoidable situation for the proper management of the higher secondary system.

The practice of teaching principal and there by thrown out system of existing teachers should be eliminated.

Since, students at higher secondary level are in specific stage of development, utmost care is required and hence, teachers should be posted in their own locality as far as possible and to stop the newly introduced compulsory transfer of teachers with more years of service.

Suggestions for Further Research

Although the present study has enabled us to understand the pattern and pace of growth and development of HSE system in Kerala to a large extent, yet it is suggested that.

- An in depth study can be conducted on the effectiveness of higher secondary level education as a precursor of higher and professional education.
- A study on quality concerns in higher secondary education can be attempted.
- Design development of resources in various subjects for facilitating teaching –learning process at higher secondary level can be done.

428 HIGHER SECONDARY EDUCATION SYSTEM

- A separate study can be conducted on national institute of open school system at HSS level in Kerala.
- A comparative study on the HSS education in Kerala with other states can be undertaken.
- A study to develop a unified curriculum for HSE and VHSE can be conducted.

REFERENCES

REFERENCES

- Aggarwal, J.C. (1978). Landmarks in the history of modern Indian education (3rd ed.). *International Journal of Science and Research (IJSR)*, 3(5). Retrieved from www.ijsr.net
- Aggarwal, J.C. (1978). *Plus two committee*. New Delhi: Arya Book Depot.
- Aggarwal, J.C. (1984). *Landmark in the history of modern Indian education*. New Delhi: Vani Books.
- Aggarwal, J.C. (1997). *Development and planning of modern education (6th revised ed.)*. New Delhi: Vikas Publishing House.
- Aggarwal. (2005). *Recent development and trends in education*. New Delhi: Shipra Publication.
- Ahmar., & Anwar. (2013). Socio economic status and its relation to academic achievement of higher secondary school students. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 13(13), 13-20.
- Aikara, J. (1980). *Implementation of the higher secondary in Bombay*. Unit for Research in the Sociology of Education. In M.B. Buch (Ed.), *Third survey of educational research*. New Delhi: NCERT.
- Alam, M. (2017). Study of impact of family on the adjustment at adolescents. *The International Journal of Indian Psychology*, 4(4), 191-200. doi: 1.25215/0404.159.
- Alavikutti, P.P. (2002). *Development of higher secondary education in Kerala*. M.Ed. Dissertation, Farook Training College.

Allport, G. (1942). The use of personal documents in psychological science.

In Charlotte (Ed.), (2010). Narrating oneself: Reflections on the use of solicited diaries with diary interviews. *Qualitative Social Research*, 11(2). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/1314/2989>.

Alno, F.O.O. (1964). *History of primary and secondary education in Southern Nigeria, 1887-1952/3 with special emphasis upon Yoruba land*. Ph.D. in Education, Bombay University.

Amanulla, M.A.K. (2015). *Influence of social sensitivity teacher accountability and teacher efficacy on professional development of higher secondary school teachers*. Doctoral Thesis, University of Calicut.

Amarnath. (1980). *Comparative study of the organizational climate of government and privately managed higher secondary schools in Jullundur District*. Ph.D. in Education, Puna University.

Ambily. (2007). *Vocational interest of higher secondary students with different level of self esteem*. Unpublished M.Ed. Dissertation, University of Calicut.

Amya, T.K. (2015). *Awareness of e waste management among science and non science students of higher secondary schools*. Unpublished M.Ed. Dissertation, University of Calicut.

Aneesa, K.T. (2015). *Self regulation student engagement and peer relation as differentiators of achievement among higher secondary school working boys*. Unpublished M.Ed. Dissertation, University of Calicut.

Aneesh, M.C. (1999). *An evaluation of the organization and functioning of vocational higher secondary course in Malappuram district*. M.Ed. Dissertation, Department of Education, University of Calicut.

- Anil, K. (2012). *Vocational higher secondary education in Kerala: A status study of students, passout, and training components*. Ph. D in Social Sciences, Cochin, Cochin University of Pedagogical science.
- Anjuprakash, K. (2015). *A study on higher education preference of higher secondary students in Kerala*. Unpublished M.Ed. Dissertation, University of Calicut.
- Arjun, M., & Juna, B. (2015). A study on the impact of social networking sites among higher secondary students. *International Journal of Social Sciences and Management*, 2(4).
- Arumugasamy, G. (2012). A study on motivation and job satisfaction of higher secondary school teachers. *Indian J. Edu. Inf. Manage.*, 1(3). Retrieved from <http://iseeadyar.org/ijeim.html>.
- Arumugsami. (2012). A study on motivation and job satisfaction of higher secondary school teachers. *Indian Journal of Educational Information Management*, 1(3).
- Arunjatai, V. (1979). *A study of the efficiency of the secondary school system in Tamil Nadu*. Madras: South Indian Teachers Council of Educational Research.
- Augustine, L.F., Vazir, S., Rao, S.F., Rao, V.V.M., & Nair, M.K. (2011). *Perceived stress, life events and coping among higher secondary students of Hyderabad, India: A pilot study*.
- Azeez, A.V.P., & Sumangala, V. (2015). Counselling needs of higher secondary school students of Kerala: An exploration into the teacher perception. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 5(3), 25-28. Retrieved from www.iosrjournals.org.

- Babu, S. (2012). Study on psychological impact of higher secondary examination with reference to delta districts. *International Journal of Social Science & Interdisciplinary Research*, 1(12).
- Bajpai, L.B. (1981). *Progress of higher secondary education in UP in the post independence period*. Ph.D. in Education, Karnataka University.
- Banerjee, B., & Mukherjee. (1962). *Facilities available to students and teachers for study and work in higher secondary schools of west Bengal: An educational survey*. Department of Statistics, Calcutta University.
- Bauer, M.W., & Gasbell, G. (2000). *Qualitative researching with text, image and sound: A practical handbook*. Delhi: Sage.
- Bauer, M.W., & Gaskell, G. (2000). *Qualitative researching with text, image and sound: A practical handbook*. Delhi: Sage
- Best, J.W., & Kahn, J.V. (2012). *Research in education (10th ed.)*. New Delhi: PHI Learning Private Limited.
- Bharathi, L.D. (1997). History of higher secondary education in Modern Assam (1968-1990): A perspective. Ph.D. Thesis, Depart of History Gauhati University. In M.B. Buch (Ed.), *Sixth Survey of Educational Research, 1993-2000* (Vol. II). New Delhi: NCERT.
- Bhargava, M.L. (1955). *History of secondary education in UP (with special reference to educational policy and finance (1904-1947))*. Ph.D. Education, All University.
- Bhatt, K.C. (1972). *A critical study of the vocational education West Germany vis-à-vis the vocational education in India*. Ph.D. in Education, MSU.

- Biswas., & Aggarwal. (1974). *10 + 2 + 3 pattern philosophy and programme. (Developments in Indian education)*. New Delhi: The Academic Publishers India.
- Bogdan, R., & Biklen, S.K. (1992). *Qualitative research for education: An introduction to theories and methods*. Boston: Allkyn and Bacon.
- Bose, P.K., Banejee, P.K., & Mukherjee, S.P. (1965). *Educational facilities available in the higher secondary schools of West Bengal (1963-64)*. Dept of Statistics, NCERT Financed, Calcutta University.
- Bryman, A. (2008). *Social research methods (3rd ed.)*. New York: Oxford University Press.
- Chandrasekaran, S. (2013). Creativity and academic achievement of higher secondary school students in Tamilnadu. *International Journal of Humanities and Social Science Invention*, 3(8), 32-36. Retrieved from www.ijhssi.org.
- Chaudhari, R.B. (1990). *Higher secondary education in the state of Gujarat: Development and problems*. Doctoral Thesis, South Gujarat University, Gujarat.
- Chauhan, C.P.S. (2004). *Modern Indian education: Policies, progress and problems*. New Delhi: Kanishka Publishers.
- Chitra, J.U. (1996). *A study on psycho-socio correlates of academic achievement of the scheduled caste girl students in the higher secondary schools of Tirunelveli-Kattabomman district*. Ph.D. Thesis, Manonmaniam Sundaranar University Tirunelveli.

Choudhary, B., & Sengupta, S. (2014). Determine of information seeking among higher secondary school level students studying in southern districts of Chhattisgarh State. *International Journal of Information Technology and Library Science*, 3(1), 25-30.

Cohen, L., & Manion, L. (2010). *Keith Morrison 'Research methods in education'*. New York: Routledge.

Corbetta, P. (2003). *Social research theory: Methods and techniques*. Delhi: Sage.

Daniel, D.J. (1986). *A study of the perceptions of the school community in the city of madras about reforming of the present examination system of the higher secondary school stage in Tamil Nadu*. Ph.D. Thesis, Sardar Patel University.

Desai, M.G. (1968). *A critical study of the growth of secondary education in Kaira district 1947-1962*. Ph.D. in Education, SPU.

Desai, S.H. (1972). *A critical study of the development of secondary education for girls in Gujarat: Its history and present day problems*. Ph.D. in Education, MSU.

Devi, S.M.B. (2014). *Effectiveness of peer mentoring in promoting life skills among higher secondary school students*. Ph.D. Thesis, Department of Education, University of Calicut.

Gangaib, N. (1980). *A critical study of English teacher education in Andrapradesh*. Ph.D. in Education, Karnataka University, 1980.

Garg, B.R. (1975). *Educational MELEE in India*. Ambalacantt: The Indian Publication Bureau.

- Gaur, J.S. (1973). *Factors affecting the occupational aspirations of higher secondary school students of Delhi*. Ph.D. in Education, IIT, New Delhi.
- Gautam, M.P. (1988). *A study of productivity oriented education with reference to the new pattern of education (10+2+3)*. Ph.D. in Education, University of Bombay.
- Geethu., & Minikkutti. (2011). A study on leadership qualities of higher secondary students using constructivist learning environment as a reference. *GCTE Journal of Research and Extension in Education*, 6(1).
- George, K.K., & Ajithkumar, N. (1999). What is wrong with Kerala's education system?. *CSES Working Paper No.3*. Edappally: Centre for Socio-Economic & Environmental Studies.
- Ghatol, S.D. (2017). Academic stress among higher secondary school students: A review. *International Journal of Applied Research in Education and Technology (IJARET)*, 4(1), 38-41.
- Ghosh, B.N. (1982). *Scientific method and social research*. New Delhi: Sterling Publishers.
- Gogate, S.B. (1980). *A critical study of the condition of second year of junior college in Maharashtra 1976-77*. Ph D Thesis, Poona University.
- Good, C.V. (1973). *Dictionary of education (3rd ed.)*. New York: McGraw Hill Book Co.
- Gopakumar, A. (2000). *A critical study on the functioning of the vocational higher secondary education in the Kuttippuram region*. Unpublished M.Ed. Dissertation, University of Calicut.

- Govt. Central Pedagogical Institute. (1987). A study of the condition of libraries and reading rooms in Govt. higher secondary schools. In M.B. Buch (Ed.). *Third Survey of Research in Education*. New Delhi: NCERT.
- Govt. of Kerala. (2011). *The Kerala Education Act, 1958 and the Kerala Education Rules, 1959* (4th Eds.). Thiruvananthapuram: Govt. of Kerala.
- Govt. of Kerala. *Kerala Service Rule (Vol. I Part I and II)* (7th ed.). Thiruvananthapuram: Finance Department.
- Gupta, M. (1967). *Problems of higher secondary schools of Agra District*. Ph.D. Education, Agra University.
- Hart, C. (2001). *Doing a literature review*. London: Sage Publications Ltd.
- Hemambujam, K. (1983). *A critical study of teacher education at the secondary level in Tamil Nadu*. Ph.D. in Education, Kartanaka University.
- Hosseini. (1990). *Educational environment of higher secondary schools of West Azarbayjan of Iran as perceived by principals, teachers, students and local community and their attitude towards school system*. Ph.D. Thesis, University of Punjab.
- Howell, A.P. (1872). Education in British India. In S.K. Saini (Ed.), (1980). *Development of education in India: Socioeconomic and political perspective*. New Delhi: Cosmo Publications.
- Jahodha, D., & Cook, G.B.N. (1982). *Scientific methods and social research*. New Delhi: Sterling Publishers.
- Jha, J.S. (1961). *Education in Bihar (1813-1859)*. Ph.D. in Education, Patna University.

- Jhonson, J. (2015). *Vocational choice of higher secondary school students in Kerala*. Unpublished M.Ed. Dissertation, University of Calicut.
- Joshi, P.M. (1980). An investigation in to organizational climate of higher secondary school of Rajkot City. In MB Buch (Ed.), *Third Survey of Research in Education*. New Delhi: NCERT.
- Kalura, A. (1997). *Efficient school management and role of principals*. New Delhi: APH Publishing Corporation.
- Kamalamma, G. (1969). *History and problems of primary education in Kerala*. Ph.D. in Education, Kerala University.
- Kansal, P. (2007). Higher education in India- Strategy of empowerment for quality assurance. *Journal of Educational Planning and Administration*, 21, 1-12.
- Kaura, S.P. (1973). *A critical study of the development of secondary education in Punjab Since the year 1947*. Ph.D. Education, Punjab University.
- Kerala State Planning Board. (1984-2016). *Economic reviews*. Thiruvananthapuram: Govt. of Kerala. Retrieved <https://www.kerala.gov.in/economicreview>.
- Khan, N.A., Mohiuddin S.S.S., Baig, MM., & Minai, T.A. (2014). Statistical analysis of constraints acquiring higher secondary education. *International Journal of Database Theory and Application*, 7(2), 141-154. Retrieved <http://dx.doi.org/10.14257/ijdta>.
- Kumar, A. (2000). *An evaluation of the organization and functioning of higher secondary schools in Kannur district*. M.Ed. Dissertation, Department of Education, University of Calicut.

- Kumar, P., & Astalin. (2011). A study of environmental awareness among higher secondary students and some educational factors affecting it. *ZENITH International Journal of Multidisciplinary Research*, 1(7).
- Kuncheria, R. (2009). *A study of the educational and vocational problems and needs of students in the vocational higher Secondary Schools of Kerala*. Ph.D. in Education, Kottayam: School of Pedagogical Sciences, MG University.
- Labba Committee Report*. (2013). Retrieved from www.hsslive.in/2013/04/prof-poj-labba-committee-report.htm
- Lichtman. (2013). *Qualitative research in education: A users guide*. New Delhi: Sage Publication.
- Maheshan, G. (1989). *A critical study of higher secondary education in Karnataka*. Ph.D. in Education, Karnataka University.
- Marilyn, L. (2013). *Qualitative research in education: A users guide (3rd ed.)*. New Delhi: Sage.
- Marshall, C., & Rossman, G.B. (1989). *Designing qualitative research*. Delhi: Sage.
- Mathur, V.S. (1971). *Revitalising Indian education*. Ambalacantt: The Indian Publications.
- Mawi, C.L., & Masisanam, P. (2014). Attitude and perception of the students towards higher secondary education in Churachandpur district of Manipur. *International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS)*, 2(1), 97-104.

- Mehdi, S. (1979). *A critical evaluation of the education programs, teaching and instructional facilities offered at the elementary state in Baroda Municipal Corporation Schools and Schools run by Private Agencies in Baroda city*. Ph.D. in Education, MSU.
- Ministry of Education (1966). *Education and national development report of the education commission (1964-66)*. New Delhi: NCERT.
- Mittal, S.C. (2000). An intensive study of school building in secondary and higher secondary schools in four selected states. In M.B. Buch (Ed.). *Fifth Survey of Research in Education*. New Delhi: NCERT.
- Modak, F.M. (1994). *A critical study of vocationalisation of education in Ratnagiri district*. Ph D in Education, Kolhapur, Sivaji University.
- Mohamedayupkhan, M.S., & Mani, A. (2014). Study on higher secondary students personal problems, study involvement and academic achievement. *International Journal of Science and Research (IJSR)*, 3(5).
- MOLE (Planning commission). (2009), *National skill development policy*. New Delhi: Government of India.
- Mookerji, R.K. (1947). *Ancient Indian education: Brahmanical & Buddhist*. New Delhi., Motilal Banarasi Dass Publishers.
- Morrison. (1993). Using diaries in research. In M. Colemanne and A.R.J. Briggs (Ed.). (2000) *Research methods in educational leadership and management*. New Delhi: Sage Publication.
- Mukherji, R.K. (1974). *Ancient Indian education*. New Delhi: Motilal Banarasi Das.

- Murthy, S.K. (1986). *Essentials of higher secondary education*. Ludhiana: Prakash Brothers.
- Nahar, R.A. (1964). *The history of education in the city of Bombay (1820-1920)*. Ph.D. in Education, Bombay University.
- Naik, J.P., & Syed, N. (1962). *A student history of education in India (1800-1961)*. New York: MacMillan Co.
- Nair, K.A., & Paul, G. (2017). A study on spiritual intelligence among higher secondary students in relation to their social adjustment. *Journal of Research in Humanities and Social Science*, 5(3), 38-42.
- NCERT. (1971). *Education and National development Report of the education commission (1964-66)*. New Delhi: NCERT
- Neuman, W.L. (2008). *Social research methods: Quantitative and qualitative approaches* (6th ed.). New Delhi: Dorling Kindersley (India) Pvt. Ltd.
- Nikitha, S., Jose, T.T., & Valsaraj, B.P. (2014). A correlational study on academic stress and self - esteem among higher secondary students in selected schools of udupi district. *NUJHS- Nitte University Journal of Health Science*, 4(1).
- Ogwokhademhe, M.C., Ajibola G.O., Kayode D.J., & Sheu, A.A. (2014). Factors influencing vocational choice of senior secondary school students in Ilorin Metropolis, Nigeria. *Educational Quest: An International Journal of Education and Applied Social Sciences* Citation: *Educational Quest*, 5(3), 161-167. doi:10.5958/2230-7311.2014.00011.7
- Oxford Dictionary*.(2017).Retrieved from <http://www.en.oxforddictionaries.com>

- Pal, S.K., & Ghosh, B. (1967). A survey of the load of work on higher secondary school teachers in UP. In M.B. Buch (Ed.), *First Survey of Educational Research*. New Delhi: NCERT.
- Palliyalil, M.A. (2004). *A study on facilities and activities of physical education in the secondary and higher secondary schools of Kerala state*. Ph.D. Thesis, Department of Education, University of Calicut.
- Parimoo, H.N. (1963). *A critical study of the educational conditions prevalent in India from 1526 AD to 1707 AD*. Ph.D. in Education, All. University.
- Patel, C.K. (1980). *A critical study of the higher secondary school organization in Gujarat state with special reference to vocational education*. Ph.D. in Education, Gujarat University.
- Patel, H.P. (1958). *Basic education and its working in the state of Bombay: A historical review*. Ph.D. in Education, Bombay University.
- Pathak, R.P. (2012). *Development and problems of Indian education*. New Delhi: Pearson.
- Patil, V.T., & Patil, B.C. (1982). *Problems in Indian education*. New Delhi: Oxford and IBH Publishing Co.
- Patton. (1990). *Qualitative evaluation and research method*. New Delhi: Sage
- Pillai, J.K., & Thangasamy, S. (1981). *Vocationalisation at the higher secondary stage of the 10+2+3+ pattern of education*. Dept. of Education, MKU.

Plummer, K. (2001). *Documents of life 2: An invitation to critical humanism*.

London: Sage

Prabu, S. (2015). A study on academic stress among higher secondary students. *International Journal of Humanities and Social Science Invention*, 4 (10), 63-68.

Prasida., & Sumathi, B.C. (2013). Effectiveness of multimedia approach on achievement in business studies of higher secondary school students of Kazaragod district. *Conflux Journal of Education*, 1(3).

Premlatha, S. (2002). *Modern methods of school organization*. Delhi: Sarup & Sons.

Pylee, M.V. (1998). *Vidyabhyasa prasanagal innaley, inne, naley*. Kottayam: DC Books.

Rajagopalan, K. (2006). *Vocational higher secondary education in Kerala- problems and prospects*. Ph.D. Thesis in Education, University of Calicut.

Rajib, C. (2016). Dimensional analysis of life orientation in higher secondary school students. *International Journal of Research in Humanities and Social Studies*, 3(2).

Ramachandran., & Ramkumar. (2005). *Education in India*. New Delhi: National Book Trust.

Ramadevi. (2008). *The constraints in the secondary education of Kerala*. Ph.D. in Education, University of Calicut.

- Raman., & Gupta. (2015). *Preparation for the world of work*. Ahmadabad: Indian institute of Management.
- Rany, S. (2008). *Developing certain strategy for the effective class room at higher secondary level*. Ph D in Education, Kottayam, School of Pedagogical Sciences, MG University.
- Ratheesh, K. (2015). *A comparative study on value preference among higher secondary school students*. Unpublished M.Ed. Dissertation, University of Calicut.
- Reddy, G.L., & Anuradha, V.L. (2013). Occupational stress of higher secondary teachers working in Vellore District. *International Journal of Educational Planning & Administration*, 3(1), 9-24.
- Reena, B., & Boruwa, S. (2014). A study involvement of higher secondary students with regard to their gender and stream of study in Lakhimpur District Assam. *International Journal of Multidisciplinary Approach and Studies*, 1(4), 124.
- Rege, M.S. (1961). *The history and survey of education in the Ratnagiri district*. Ph.D. in Education, Bombay University.
- Renjith, K. (2014). *Research methodology: A step by step guide for beginners (4th ed.)*. New Delhi: Sage.
- Roobi, V. (2015). *Entrepreneurial motivation and socio economic status as predictors of career aspiration of higher secondary commerce students in Malappuram districts*. Unpublished M.Ed. Dissertation, University of Calicut.

Roopa, G. (2015). *Influence of self efficacy and academic stress on process skills in physics of higher secondary school students in Malappuram and Kozhikode districts*. Unpublished M.Ed. Dissertation, University of Calicut.

Saini, S.K. (1990). *Development of education in India*. New Delhi: Cosmo Publication.

Salma, P. (2015). *Within learner protective factors of academic achievement of Kozhikode district*. Unpublished M.Ed. Dissertation, University of Calicut.

Saxena, S. (1959). *Preprimary education in India*. Ph.D. in Education, Lucknow University.

SCERT. (2007). *Kerala curriculum framework*. Thiruvananthapuram: SCERT.

SCERT. (2013). *Kerala curriculum approach*. Thiruvananthapuram: SCERT.
Retrieved from www.SCERT.kerala.gov.in/images/2014/Handbook.../approach%20paper_november.pdf.

Seetharamu, A.S., & Manvikar, S. (1986). *Secondary for education – A status survey*. ISEC Bangalore.

Senam, C.S. (2012). *The complete book of reference on higher secondary education in Kerala*.

Sethumadhavan, N. (2005). *A critical examination of the programme of vocational higher secondary education in Kerala*. Ph.D. Education, Sree Sankaracharya University of Sanskrit, Kalady.

- Sharma, R. (2002). *Schools and schooling in India: A critical and comparative estimate*. Delhi: Shubhi Publications.
- Sharma, R.N., & Sharma, P.K. (2002). *Problems of education in India*. Delhi: Atlantic Publishers and Distributors.
- Sharma, S.R. (1994). *Vocational education and training, history, methodology-Issues and perspectives, (Vol.2)*. Delhi: Mittal Publications.
- Sharma, Y.K. (2001). *History and problems of education (Vol. I)*. New Delhi: Kanishka Publishers.
- Sherma, B., Prasad, D.R., & Sathyanarayana, P. (1983). *Research methods in social sciences*. Delhi: Sterling Publishers
- Shooper, C.J. (1982). Vocational education. *The World Book of Encyclopaedia*, 338-340.
- Shukla, R.S. (1976). *An investigation to the secondary teacher education programme in Orissa- A critical and constructive study*. Ph.D. in Education, Utkal University, 1976.
- Shukla, S.C. (1958). *Educational development of British India (1854-1904)*. Unpublished Ph.D. Thesis, Delhi University.
- Siddiqui, W.H. (1986). *Study of the existing system of education in Nepal- A critical study*. Ph.D. in Education, AMU.
- Sikes, P. (Ed.). (2004). *Doing educational research: A guide for first time researchers*. Delhi: Vistaar Publications.

Silva, P. (2015). *Relationship of goal orientation and approaches to learning on achievement in commerce of higher secondary school students in Malappuram district*. Unpublished M.Ed. Dissertation, University of Calicut.

Singh, R.P. (1960). *Democracy and higher secondary education in UP (India)*. Ph.D. in Education, Lucknow University.

Singh, U., & Varghese. (2013). SWOT analysis of vocational courses in Kerala. *An International Peer Reviewed Scholarly Research Journal for Interdisciplinary Studies*.

Somekh, B., & Lewin, C. (2005). *Research methods in the social sciences*. Delhi: Vistaar Publication.

Sooryamoorthy, R. (1999). Infrastructure academic standard and performance-A study of selected schools in Kerala. *New Frontiers in Education*, 29 (173-1792).

Soundaravalli, S. (1984). *A critical study of the functioning of the vocational education stream in higher secondary schools in Tamil Nadu*. Ph.D. in Education, Karnataka University.

Sukumar, S.K. (2013). *Total quality management in higher secondary school education in Kerala*. Ph.D. Thesis, Post Graduate Department of Commerce and Research Centre, Bharata Mata College, Thrikkakara, Kochi, Mahatma Gandhi University, Kottayam.

- Sumathi., & Jayakumar. (2014). An empirical study on stress management for higher secondary students in Salem district-Tamil Nadu. *International Journal of Recent Advances in Organizational Behaviour and Decision Sciences (IJRAOB): An Online International Monthly Journal*, 1 (1).
- Tagore's view. Retrieved from http://epathshala.nic.in/wp-content/doc/NCF/Pdf/_art_education.pdf
- Tiwari, D.D. (1964). *Primary education in UP*. Ph.D. in Education, All University.
- Tok., & Boruwa. (2014). A study involvement of higher secondary students with regard to their gender and stream of study in Lakhimpur District, Assam. *International Journal of Multidisciplinary Approach and Studies*, 1(4), 124.
- Upasan, N.K. (1966). *An evaluation of the existing teacher training programme for primary teachers in the state of Maharashtra with special reference to rural areas*. Ph.D. in Education, Poona University.
- Updhyay, D. (2002). *History of education in India*. New Delhi: Wisdom Press.
- Velmurugan., & Balakrishnan, V. (2013). Achievement motivation of higher secondary students in relation to locality and type of family. *International Journal of Teacher Educational Research (IJTER)*, 2 (5).

- Wheiler., & Reis H.T. (1991). Self recording of everyday life events: Origins, types and uses. In N. Bolger, A. Davis and E. Rafaeli (Eds.), (2003). Diary methods capturing life as it is lived. *Annul Review Psychology*. Doi-10.1146/Annurev. Psych.54.101601.145030.
- Winter, G. (2000). A comparative discussion of the notion of 'validity' in qualitative and quantitative and quantitative research. *The Quantitative Report*, 43(3), 1-14. Retrieved from <http://nsuworks.nova.edu/tqr/vol4/iss3/4>
- Yadav, D.D. (1980). *A critical study of teacher education in the state of Haryana and its comparison with that of CIE Delhi and the RCE Ajmer*. Ph.D. Education, Raj University.
- Yeli, R.S. (1979). *A critical study of preparing education in Karnataka*. Ph.D. in Education, Karnataka University.

APPENDICES

Appendix- I

LIST OF SCHOOLS SELECTED FOR DATA COLLECTION

Higher Secondary Schools

1. MPMHSS Chungathara
2. KMHSS Karulai
3. PKM HSS Edarikkode
4. Nirmal HSS Erumamunda
5. MHSS Munniyoor
6. RMHSS Melattur
7. MESHSS Irimbilyam
8. CBHSS Vallikkunu
9. PHSS Kadambode
10. JNR HSS Edavanna
11. NHSS Narokkavu
12. DVHSS Thootha
13. VHMHSS Morayoor
14. St. Gemas Girls Malappuram
15. SSMHSS Nannanbra Thanur
16. AVHSS Ponnani
17. PMSAPTHSS Kakkove
18. SNMHSS Parappanagadi
19. BEMHSS Parappanagadi
20. ASMHSS Velliyancheri
21. GGHSS Pookottur
22. GVMC Wandoor
23. GGHSS Thiruvalli
24. GSVHSS Sulthanbatheri

25. GHSS Eranchimangad
26. GVHSS Makkaraparamba
27. GHSS Kottakkal
28. GHSS Peruvaloor
29. GHSS Kuzhimanna
30. GHSS Karakkunnu
31. GHSS Mankada
32. GHSS Pang
33. GHSS Pulamanthole
34. GHSS Palppetty
35. GHSS Paravenna
36. GHSS Ezhur Thirur
37. GHSS Purathoor
38. GGHSS Malappuram
39. GHSS Pandikkad
40. GHSS Areakode
41. GHSS Kottapuram
42. GVHSS Pullanoor
43. GHSS Perumannur
44. GHSS Arimbra
45. GHSS Moothedath
46. GBHSS Manjeri
47. GGHSS Manjeri
48. GHSS Chelari
49. Umbichihaji HSS Chaliyam
50. RKMHSS, Calicut
51. NSSEMHSS Manjeri
52. FMHSS Thirur
53. IRHSS Edayur

54. WIC HSS Eriyad
55. GBHSS Malappuram
56. Ganapth HSS Feroke
57. MSP HSS Malappuram
58. GVHSS Cherpulasserri
59. Kalladi HSS

Vocational Higher Secondary Schools

1. GVHSS Chelari
2. GRFTHSS Beypore
3. JTS, Manjeri
4. GVHSS Meenchanda
5. GSVHSS Sulthanbatheri
6. Sreevivekananda HSS Palemad
7. KPSM VHSS Varode
8. GGVHSS Wandoor

Appendix II

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

QUESTIONNAIRE ON HIGHER SECONDARY EDUCATION SYSTEM FOR HIGHER SECONDARY TEACHERS

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Instructions:-

This questionnaire is a part of data collection for a research conducted in the area of higher secondary education in Kerala. The purpose of this questionnaire is to seek information regarding higher secondary teachers in Kerala. Kindly go through each questions and mark your response by putting a '✓' against the choice given (yes/No) and write your comments in the space provided (wherever necessary). The data collected through this questionnaire will be kept confidential and used for research purpose only.

Part: A

Name :
Name of the School :
Type of school : Govt./Aided/Unaided/VHSS
Gender : Male/Female
Educational Qualification :-
Academic qualifications :
Professional qualification:
Subjects taught :
Teaching Experience : Years (.....), Months (.....)

Part: B

Do you have the following facilities in your school? Please tick relevant ones.

- 1) Are dictionaries and other reference books made available to the students?
Yes No
- 2) Do you encourage reading habits of students? Yes No

3) Whether there is any problem in utilising library facilities by students

Yes No

If yes, please specify:

.....
.....

4) Do you think that the existing syllabus is adequate? Yes No

If No, please write your suggestions regarding further improvement of the syllabus.....

.....

5) Whether the student centred teaching is effective for your subject?

Yes No

6) Constraints faced by you in student centred curriculum transaction. Please tick relevant ones;-

- Large number students in the class
- Bulky syllabus
- Lack of adequate time
- Any other please specify:.....

7) Do you have adequate time for preparation? Yes No

8) Please list out the constraints in advance preparation for the class

.....
.....
.....

9) Do you think students reached higher secondary classes after attaining minimum level of learning? Yes No

10) Do you find ample time to provide remedial lessons for those students who lack necessary pre requisites? Yes No

11) Do you think that the text book is effective in planning and decision making about your class room instruction? Yes No

12) Do you think that the contents in the text book are appropriate for acquiring the objectives? Yes No

13) List out your suggestions to improve the higher secondary text book?

14) How will you evaluate the higher secondary text book? Please tick relevant ones:-

- i. Text book is efficient as a teaching aid.

- ii. Contents in the text book is accurate
- iii. Structure of the text book is good
- iv. Language used in the text book is simple
- v. Accurate printing of the content
- vi. Readability of the content is fully sufficient
- vii. Appropriate illustrations in the text book
- viii. Good mechanical make up of the text book

15) Do you think that the contents of existing text book are divided in to units which are logically organised in the order of difficulty?

Yes No

16) Are the handbooks available in your school? Yes No

17) Are the modern technologies available in your school? Yes No

18) Are you able to utilise modern technological aids in class room Yes No

19) Whether the syllabus is over loaded? Yes No

20) Whether the existing syllabus have to be restructured? Yes No

21) Do you think some topics are irrelevant in the syllabus? Yes No

22) Do you think syllabus is according to the and ability of students? Yes No

23) Adequate time is available for effective curriculum transaction? Yes No

If No, please specify the reason for the same:.....

.....

24) Which of the following visual aids are there in your institution? Please tick the relevant ones –

Models Film strips Computer
 Recordings Projector Any other (specify).....

25) No. of students in a batch : -----

26) How many students can be accommodated in the lab at a time? -----

27) Do you feel any difficulty in providing instruction and guidance during the experiment? Yes No

28) Could you be able to ensure the following satisfactorily?

- Every student is doing experiments/ lab work. Yes No
- Students get enough practical skill through lab work Yes No
- Teacher get adequate time to give individual instructions Yes No
- Any other opinion.....

29) Do you feel any short comings in the lab? Yes No

If yes, what are they (specify).....

30) Do students attend the class in time Yes No

31) Is the attendance entered regularly Yes No

32) Is there any irregularity problems Yes No

If yes, please specify:.....

33) Are you able to give individual attention? Yes No

34) Do you repeat difficult sections of the lessons in the class? Yes No

35) The measures you adopt for handling those who are below average

- Repeating difficult portions
- Give extra time
- Motivation/Reward if S/he complete the task in time
- Provide remedial teaching
- Try to involve them in main stream activity
- Any other.....

36) The measures you adopt for handling those who are gifted:

- Give enrichment activities
- Assigning different types of tasks
- Assigning independent projects
- Allow open forums and debates in the class room
- Encourage to participate in extracurricular activities
- Conduct academic contests
- Any other.....

37) The existing teacher pupil ratio is a hindrance for giving individual attention Yes No

38) Do you adopt regular self valuation to assess effectiveness of the instruction? Yes No

- Procedure adopted for self evaluation please tick relevant ones:-

Self monitoring

Student's feedback on teaching

Audio and video recording of class

Checking assignment and test results

Any other

39) Are unit test conducted at the end of each unit Yes No

40) Valued answer scripts are given back to students in time. Yes No

41) Do you maintain students profile based on CCE Yes No

42) Do you ensure the objectivity of conducting unit test Yes No

43) List out the problems in ensuring the objectivity of test

44) Constraints felt by you in evaluating student's performance.

- Evaluating group work on spot
- To evaluate home work in the correct time
- To evaluate each child through project
- To evaluate information collected through discussion observation
- To evaluate seminar work
- To evaluate social values nurtured through group activities

45) Do you think that the valuation camp during vacation period create difficulties? Yes No

If yes please specify:.....

.....

46) Do you think that camp valuation is effective? Yes No

47) List out your suggestions for effective camp valuation? Yes No

48) List out the constraints felt by you in working with continuous and comprehensive evaluation at higher secondary level.

- Difficulty in recording the details
- Difficulty to evaluate practical work
- Difficulty to evaluate the social values
- Lack of time
- Difficult to evaluate group activities on the spot
- Over loaded work
- Teachers simply assigning marks
- High teacher pupil ratio

Any other.....

49) Whether you get any training for managing adolescents? Yes No

50) Did you attend any in- service courses? Yes No

If yes, please give details:-

Sl. No	Duration of the course	Course name	Providing Agency	Benefit of the course

51) Short comings if any in courses (please specify)

.....
.....

52) Whether there is any need for in-service courses

- Monthly
- Terminal
- Yearly

53) Mention the areas which you require special training.

.....
.....
.....

54) Which of the following are functioning most effectively in your school?

- NCC NSS Nature club Arts club
Social club Language club School parliament
ASAP Souhrida club Any other.....

55) Are you satisfied with the general discipline of your school?

Yes No

56) Any suggestions to improve discipline at your school:

.....
.....

57) Do you think that new time schedule is better than earlier? Yes No

If, No, specify the problems in the new schedule

.....
.....

58) Does PTA act as sufficiently in your school?

Yes No

59) Does it support various activities of school? Yes No

60) Are you satisfied with the working of PTA in your school? Yes No

If No, specify the reasons

.....
.....

61) Please list out duties needs to be performed by you in addition to regular classes.

62) List out your suggestions for strengthening of higher secondary education system in Kerala (only for higher secondary teachers).

Appendix III

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

QUESTIONNAIRE ON VOCATIONAL HIGHER SECONDARY EDUCATION SYSTEM FOR VOCATIONAL HIGHER SECONDARY TEACHERS

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Instructions:-

This questionnaire is a part of data collection for a research conducted in the area of vocational higher secondary education in Kerala. The purpose of this questionnaire is to seek information regarding vocational higher secondary teachers in Kerala. Kindly go through each questions and mark your response by putting a '✓' against the choice given (yes/No) and write your comments in the space provided (wherever necessary). The data collected through this questionnaire will be kept confidential and used for research purpose only.

Part: A

Name :
Name of the School :
Type of school : Govt./Aided/Unaided/VHSS
Gender : Male/Female
Educational Qualification :-
Academic qualifications :
Professional qualification:
Subjects taught :
Teaching Experience : Years (.....), Months (.....)

Part: B

Do you have the following facilities in your school? Please tick relevant ones.

- 1) Are dictionaries and other reference books made available to the students?
Yes No
- 2) Do you encourage reading habits of students? Yes No

3) Whether there is any problem in utilising library facilities by students

Yes No

If yes, please specify:

.....
.....
.....

4) Do you think that the existing syllabus is adequate? Yes No

If No, please write your suggestions regarding further improvement of the syllabus.....

.....
.....

5) Whether the student centred teaching is effective for your subject?

Yes No

6) Constraints faced by you in student centred curriculum transaction. Please tick relevant ones:-

- Large number students in the class
- Bulky syllabus
- Lack of adequate time
- Any other please specify:.....

7) Do you have adequate time for preparation? Yes No

8) Please list out the constraints in advance preparation for the class

.....
.....
.....

9) Do you think students reached higher secondary classes after attaining minimum level of learning? Yes No

10) Do you find ample time to provide remedial lessons for those students who lack necessary pre requisites? Yes No

11) Do you think that the text book is effective in planning and decision making about your class room instruction? Yes No

12) Do you think that the contents in the text book are appropriate for acquiring the objectives? Yes No

13) List out your suggestions to improve the higher secondary text book?

14) How will you evaluate the higher secondary text book? Please tick relevant ones:-

- i. Text book is efficient as a teaching aid.
- ii. Contents in the text book is accurate
- iii. Structure of the text book is good
- iv. Language used in the text book is simple
- v. Accurate printing of the content
- vi. Readability of the content is fully sufficient
- vii. Appropriate illustrations in the text book
- viii. Good mechanical make up of the text book

15) Do you think that the contents of existing text book are divided in to units which are logically organised in the order of difficulty?

Yes No

16) Are the handbooks available in your school? Yes No

17) Are the modern technologies available in your school? Yes No

18) Are you able to utilise modern technological aids in class room Yes No

19) Whether the syllabus is over loaded? Yes No

20) Whether the existing syllabus have to be restructured? Yes No

21) Do you think some topics are irrelevant in the syllabus? Yes No

22) Do you think syllabus is according to the and ability of students? Yes No

23) Adequate time is available for effective curriculum transaction? Yes No

If No, please specify the reason for the same:.....

.....

.....

.....

24) Which of the following visual aids are there in your institution? Please tick the relevant ones –

Models Film strips Computer
Recordings Projector Any other (specify).....

25) No. of students in a batch : -----

26) How many students can be accommodated in the lab at a time? -----

27) Do you feel any difficulty in providing instruction and guidance during the experiment? Yes No

28) Could you be able to ensure the following satisfactorily?

- Every student is doing experiments/ lab work. Yes No
- Students get enough practical skill through lab work Yes No
- Teacher get adequate time to give individual instructions Yes No
- Any other opinion.....

29) Do you feel any short comings in the lab? Yes No
If yes, what are they (specify).....

30) Do students attend the class in time Yes No

31) Is the attendance entered regularly Yes No

32) Is there any irregularity problems Yes No

If yes, please specify:.....

33) Are you able to give individual attention? Yes No

34) Do you repeat difficult sections of the lessons in the class? Yes No

35) The measures you adopt for handling those who are below average

- Repeating difficult portions
- Give extra time
- Motivation/Reward if S/he complete the task in time
- Provide remedial teaching
- Try to involve them in main stream activity
- Any other.....

36) The measures you adopt for handling those who are gifted:

- Give enrichment activities
- Assigning different types of tasks
- Assigning independent projects
- Allow open forums and debates in the class room
- Encourage to participate in extracurricular activities
- Conduct academic contests
- Any other.....

37) The existing teacher pupil ratio is a hindrance for giving individual attention Yes No

38) Do you adopt regular self valuation to assess effectiveness of the instruction? Yes No

• Procedure adopted for self evaluation please tick relevant ones:-

Self monitoring

Student's feedback on teaching

Audio and video recording of class

Checking assignment and test results

Any other

39) Are unit tests conducted at the end of each unit Yes No

40) Valued answer scripts are given back to students in time. Yes No

41) Do you maintain students profile based on CCE Yes No

42) Do you ensure the objectivity of conducting unit test Yes No

43) List out the problems in ensuring the objectivity of test

44) Constraints felt by you in evaluating student's performance.

- Evaluating group work on spot
- To evaluate home work in the correct time
- To evaluate each child through project
- To evaluate information collected through discussion observation
- To evaluate seminar work
- To evaluate social values nurtured through group activities

45) Do you think that the valuation camp during vacation period create difficulties? Yes No

If yes please specify:.....

.....

.....

46) Do you think that camp valuation is effective? Yes No

47) List out your suggestions for effective camp valuation? Yes No

48) List out the constraints felt by you in working with continuous and comprehensive evaluation at higher secondary level.

- Difficulty in recording the details
- Difficulty to evaluate practical work
- Difficulty to evaluate the social values
- Lack of time
- Difficult to evaluate group activities on the spot
- Over loaded work
- Teachers simply assigning marks

- High teacher pupil ratio

Any other.....

49) Whether you get any training for managing adolescents? Yes No

50) Did you attend any in- service courses? Yes No

If yes, please give details:-

Sl. No	Duration of the course	Course name	Providing Agency	Benefit of the course

51) Short comings if any in courses (please specify)

.....

52) Whether there is any need for in-service courses

- Monthly
- Terminal
- Yearly

53) Mention the areas which you require special training.

.....

54) Which of the following are functioning most effectively in your school?
 Rank it by assigning 1, 2, 3....in the order of preference

- NCC NSS Nature club Arts club
 Social club Language club School parliament
 ASAP Souhrida club Any other.....

55) Are you satisfied with the general discipline of your school?

Yes No

56) Any suggestions to improve discipline at your school:

.....

57) Does PTA act as sufficiently in your school?

Yes No

58) Does it support various activities of school?

Yes No

59) Are you satisfied with the working of PTA in your school? Yes No

If No, specify the reasons

.....

60) Please list out duties needs to be performed by you in addition to regular classes.

61) Do you think that students select vocational higher secondary courses only as a last option than higher secondary course?

62) What are the reasons for such selection? Please tick relevant ones:-

- Lack of proper orientation about VHSE
- Lack of media support
- Limited chances for advanced studies
- Lack of reservation for higher studies
- Introduction of ASAP in higher secondary schools
- Out dated courses
- Equalency problems with plus two courses of other states
- Any other (specify).....

63) Do you think that students have misconception that higher secondary courses are superior? Yes No

64) Do you think that higher secondary got more preference than vocational higher secondary?

- By Media Yes No
- By Public Yes No
- By Parents Yes No
- By Students Yes No

65) Do you think that difference in higher secondary and vocational higher secondary create any problems for students in applying for the following:-

- Central government jobs
- State government jobs
- Higher studies

66) Do you think that the vocational courses offered in vocational higher secondary schools should have regional practical significance? Yes No

67) Do you think that the existing courses in VHSE are out dated?
Yes No

68) Is there any problem of equivalency and recognition of different VHS courses?
Yes No

Please specify the courses

.....
.....

69) Are there problems to VHS students for getting admission to higher studies?

Yes No

If yes what are the problems?

.....
.....
.....

70) Do you think that adequate facilities are there for advanced level studies to students after vocational higher secondary courses? Yes No

71) Whether there is adequate job opportunity to students after the successful completion of the courses? Yes No

72) What are the incentives required to motivate students to VHSE?

- Stipend for the course
- Liberal loans for self employment
- Equalency with plus two
- Reservation for higher studies
- Campus selection
- Job security
- Apprenticeship with stipend
- Any other.....

73) Whether there is any need for the introduction of innovative courses in VHSE

Yes No

If yes please suggest areas of your preference

.....
.....
.....

74) Do you think that the introduction of ASAP in higher secondary schools negatively affect vocational higher secondary? Yes No

75) Do you get adequate co operation from industries and factories for providing training facilities to students? Yes No

76) Whether authentic text book is available for your subject? Yes No

If No, how will you manage this constraints

.....
.....
.....

77) Do you get any in-service training programmes for meeting the needs of vocational higher secondary education? Yes No

If yes, please give details:-

Sl. No	Duration of the course	Course name	Providing Agency	Benefit of the course

78) Whether there is enough provisions in the special rules with regard to vocational higher secondary teachers promotion? Yes No

79) Do you think that VHSE teachers association is effective to solve the problems of vocational higher secondary teachers? Yes No

80) Do you think that DVHSE is effective in managing academic and administrative affairs? Yes No

81) List out your suggestions for strengthening VHSE?

Appendix IV

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
QUESTIONNAIRE ON HIGHER SECONDARY EDUCATION SYSTEM
FOR HIGHER SECONDARY STUDENTS

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

നിർദ്ദേശങ്ങൾ

കാലിക്കറ്റ് സർവ്വകലാശാല വിദ്യാഭ്യാസ വിഭാഗത്തിലെ ഗവേഷകയാണ് ഞാൻ. കേരളത്തിലെ ഹയർസെക്കന്ററി വിദ്യാഭ്യാസ മേഖലയെക്കുറിച്ച് ഒരു ഗവേഷണം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. എന്റെ ഗവേഷണാവശ്യത്തിനായി കേരളത്തിലെ ഹയർസെക്കന്ററി വിദ്യാർത്ഥികളിൽനിന്ന് കുറച്ച് വസ്തുതകൾ ആവശ്യമായി വന്നിരിക്കുന്നു. ആയതിനാൽ ദയവായി ഇതോടൊപ്പമുള്ള ചോദ്യാവലി നിർദ്ദേശങ്ങളനുസരിച്ച് പൂരിപ്പിച്ച് നൽകുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ എന്റെ ഗവേഷണത്തിനു വേണ്ടി മാത്രം ഉപയോഗിക്കുന്നതാണ്.

ലിംഗം : ആൺ/പെൺ

പഠിക്കുന്ന വിദ്യാലയം :

പഠിക്കുന്ന കോഴ്സ് :

- നിങ്ങളുടെ ഇഷ്ടാനുസരണമുള്ള കോഴ്സിൽതന്നെ ഹയർസെക്കന്ററിക്ക് പ്രവേശനം ലഭിച്ചോ? ഉണ്ട് ഇല്ല
- ലഭിച്ച കോഴ്സിൽതന്നെ ഉന്നത പഠനം നടത്താൻ നിങ്ങൾക്ക് താല്പര്യമുണ്ടോ? ഉണ്ട് ഇല്ല
- ഹൈസ്കൂൾ പഠനകാലയളവിലെ പഠനമാധ്യമം
മലയാളം ഇംഗ്ലീഷ് മറ്റുള്ളവ
- പഠനമാധ്യമത്തിലെ മാറ്റം ഹയർസെക്കന്ററി പഠനത്തിന് ബുദ്ധിമുട്ട് ഉണ്ടാക്കുന്നുണ്ടോ? ഉണ്ട് ഇല്ല
ഉണ്ടെങ്കിൽ, ഏതെല്ലാം തരത്തിലുള്ള പ്രയാസങ്ങളാണ് നിങ്ങൾക്ക് അനുഭവപ്പെടുന്നത്.
.....
.....
- ക്ലാസ്സിൽ നടക്കുന്ന പഠനപ്രക്രിയകളിലൂടെ മനസിലാവാത്ത ഭാഗങ്ങൾ വ്യക്തമായി മനസിലാക്കാൻ വേണ്ടി നിങ്ങൾ സംശയനിവാരണം നടത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
- സംശയനിവാരണം നടത്തുന്നതിന് അധ്യാപകരുടെ സേവനം വേണ്ടവിധം ലഭ്യമാവാറുണ്ടോ? ഉണ്ട് ഇല്ല

നിർദ്ദേശങ്ങൾ: താഴെ തന്നിരിക്കുന്ന 7 മുതൽ 31 വരെയുള്ള ചോദ്യങ്ങൾ നിങ്ങളുടെ സ്കൂളിലെ ഭൗതിക സൗകര്യങ്ങളെ സംബന്ധിച്ചുള്ളതാണ് അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക.

7. നിങ്ങളുടെ സ്കൂളിൽ ഹയർ സെക്കന്ററി കുട്ടികൾക്കുള്ള ലൈബ്രറി സൗകര്യം പര്യാപ്തമാണോ? ആണ് അല്ല
8. നിങ്ങളുടെ പഠനത്തിനുപകരിക്കുന്ന എല്ലാ വിവരങ്ങളും ലൈബ്രറിയിൽ ലഭ്യമാവാറുണ്ടോ? ഉണ്ട് ഇല്ല
9. ലഭ്യമാവുന്ന സമയങ്ങളിലൊക്കെ ലൈബ്രറി സൗകര്യം പ്രയോജനപ്പെടുത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
10. ലൈബ്രറി സൗകര്യം പ്രയോജനപ്പെടുത്താൻ വേണ്ടിയുള്ള പ്രോത്സാഹനം അധ്യാപകർ നൽകാറുണ്ടോ? ഉണ്ട് ഇല്ല
11. ലൈബ്രറി ബുക്കുകൾ വിതരണം ചെയ്യുവാൻ ഏത് രീതിയാണ് നിങ്ങളുടെ സ്കൂളിൽ സ്വീകരിക്കാറുള്ളത്? (അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക)
 - i. അധ്യാപകർ വിതരണം ചെയ്യുന്നു
 - ii. വിദ്യാർത്ഥികൾ വിതരണം ചെയ്യുന്നു
 - iii. ലൈബ്രറിയൻ വിതരണം ചെയ്യുന്നു
 - iv. വിതരണം ചെയ്യാറില്ല
 - v. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....
12. ലൈബ്രറി സൗകര്യം കാര്യക്ഷമമായി പ്രയോജനപ്പെടുത്തുന്നതിൽ നിങ്ങൾ നേരിടുന്ന പ്രയാസങ്ങൾ (അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക).
 - i. സമയത്തിന്റെ അപര്യാപ്തത
 - ii. കാര്യക്ഷമമായ ലൈബ്രറി പ്രവർത്തനത്തിന്റെ അഭാവം
 - iii. ലൈബ്രറി പ്രവർത്തനത്തെ കുറിച്ചുള്ള അറിവില്ലായ്മ
 - iv. മറ്റുള്ളവ.....

നിർദ്ദേശങ്ങൾ: താഴെ തന്നിരിക്കുന്ന 13 മുതൽ 18 വരെയുള്ള ചോദ്യങ്ങൾ ലാബ് സൗകര്യം പ്രയോജനപ്പെടുത്താറുള്ള വിദ്യാർത്ഥികളെ സംബന്ധിച്ചുള്ളതാണ്.

13. നിങ്ങളുടെ സ്കൂളിൽ ലാബിന്റെ പ്രവർത്തനം കാര്യക്ഷമമായി നടത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
14. അനുവദിച്ചിട്ടുള്ള സമയങ്ങളിലെല്ലാം ലാബ് സൗകര്യം പ്രയോജനപ്പെടുത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
 'ഇല്ല' എങ്കിൽ കാരണം വ്യക്തമാക്കുക.
15. ലാബ് സൗകര്യം പ്രയോജനപ്പെടുത്താൻ വേണ്ട ഭൗതിക സൗകര്യങ്ങളെല്ലാം നിങ്ങളുടെ ലാബിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല
16. ലാബ് സൗകര്യം ഉപയോഗിക്കുമ്പോൾ ലാബ് അസിസ്റ്റന്റിന്റെ സേവനം നിങ്ങൾക്ക് ലഭിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
17. പ്രാക്ടിക്കൽ ചെയ്യുന്നതിന് അധ്യാപകർ കൃത്യമായ മാർഗ്ഗനിർദ്ദേശങ്ങൾ നൽകാറുണ്ടോ? ഉണ്ട് ഇല്ല

18. ലാബിന്റെ നിലവിലെ പ്രവർത്തനത്തിൽ നിങ്ങൾ തൃപ്തനാണോ?

അതെ അല്ല

ഇല്ലെങ്കിൽ, കാരണങ്ങൾ വ്യക്തമാക്കുക.

നിർദ്ദേശങ്ങൾ: താഴെ തന്നിരിക്കുന്ന 19 മുതൽ 24 വരെയുള്ള ചോദ്യങ്ങൾ കമ്പ്യൂട്ടർ ഒരു പഠനമേഖലയായി വരുന്ന വിദ്യാർത്ഥികളെ ഉദ്ദേശിച്ചുള്ളവയാണ്. അനുയോജ്യമായ രീതിയിൽ അടയാളപ്പെടുത്തുക.

19. ഹയർ സെക്കന്ററി വിദ്യാർത്ഥികൾക്ക് പ്രയോജനം ലഭിക്കുന്ന രീതിയിൽ ഒരു കമ്പ്യൂട്ടർ ലാബ് നിങ്ങളുടെ സ്കൂളിൽ പ്രവർത്തിക്കുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

20. ആവശ്യത്തിനുള്ള സൗകര്യങ്ങൾ കമ്പ്യൂട്ടർ ലാബിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല

21. ഇന്റർനെറ്റ് സൗകര്യം കമ്പ്യൂട്ടർ ലാബിൽ ലഭ്യമാണോ? ഉണ്ട് ഇല്ല

22. കമ്പ്യൂട്ടർ ഇൻസ്ട്രക്ടറിന്റെ സേവനം ലാബിൽ നിങ്ങൾക്ക് ലഭിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

23. കമ്പ്യൂട്ടർ ലാബ് ഉപയോഗിക്കാൻ പ്രത്യേക സമയം അനുവദിച്ചിട്ടുണ്ടോ? ഉണ്ട് ഇല്ല

24. അനുവദിച്ചിട്ടുള്ള സമയങ്ങളിൽ കമ്പ്യൂട്ടർ ലാബ് ഉപയോഗപ്പെടുത്താൻ സാധിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഇല്ലെങ്കിൽ, അതിനുള്ള കാരണങ്ങൾ വിശദമാക്കുക.

25. കായികാധ്യാപകന്റെ സേവനം നിങ്ങൾക്ക് കായിക പരിശീലനത്തിന് ലഭിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

26. നിങ്ങൾ കായിക മത്സരങ്ങളിൽ പങ്കെടുക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഉണ്ടെങ്കിൽ, ഏതിനങ്ങളിൽ?

27. പങ്കെടുക്കുന്ന കായിക ഇനങ്ങൾക്ക് വേണ്ടിയുള്ള പരിശീലനം സ്കൂളിൽ നിന്ന് കിട്ടാറുണ്ടോ? ഉണ്ട് ഇല്ല

28. കായിക മത്സരങ്ങളിൽ പങ്കെടുക്കാൻ വേണ്ടി അധ്യാപകർ നിങ്ങളെ പ്രോത്സാഹിപ്പിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

29. ടൈം ടേബിൾ പ്രകാരം അനുവദിച്ച സമയങ്ങളിൽ കായിക പരിശീലനത്തിന് അവസരം കിട്ടാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഇല്ലെങ്കിൽ, ആ സമയം എങ്ങനെയെല്ലാം വിനിയോഗിക്കുന്നു (വ്യക്തമാക്കുക)

30. ഹയർസെക്കന്ററി വിദ്യാർത്ഥികൾക്ക് ആവശ്യാനുസരണമുള്ള ടോയ്ലറ്റ് സൗകര്യം നിങ്ങളുടെ സ്കൂളിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല

31. നിങ്ങൾക്ക് ലഭ്യമായിട്ടുള്ള ടോയ്ലറ്റ് സൗകര്യത്തിന്റെ പോരായ്മകൾ വ്യക്തമാക്കുക.

32. ഓരോ പാഠഭാഗം കഴിയുമ്പോഴും യൂണിറ്റ് ടെസ്റ്റുകൾ നടത്താറുണ്ടോ?

- i. എല്ലാവിഷയങ്ങൾക്കും നടത്താറുണ്ട്
- ii. ചില വിഷയങ്ങൾക്ക് മാത്രം നടത്താറുണ്ട്
- iii. നടത്താറില്ല

33. മൂല്യനിർണ്ണയം കഴിഞ്ഞ ഉത്തരപേപ്പറുകൾ അധ്യാപകർ യഥാസമയം തിരിച്ചു തരാറുണ്ടോ? ഉണ്ട് ഇല്ല

34. നിങ്ങളുടെ അക്കാദമിക് മികവ് എത്രയെന്ന് യഥാസമയം കണ്ടെത്തുന്നതിന് വേണ്ടി കൂടുതൽ പരീക്ഷകൾ നടത്തണമെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

35. നിലവിൽ നിങ്ങളെ വിലയിരുത്തുന്ന രീതി കാര്യക്ഷമമാണെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

ഇല്ലെങ്കിൽ, കാരണങ്ങൾ അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക.

- i. മൂല്യനിർണ്ണയത്തിൽ അധ്യാപകർ പക്ഷപാതപരമായ സമീപനം കാണിക്കുന്നു
- ii. പ്രാക്ടിക്കൽ പരീക്ഷകൾ കാര്യക്ഷമമായി നടക്കാറില്ല
- iii. അധ്യാപകർ പ്രത്യേക മാനദണ്ഡങ്ങളൊന്നുമില്ലാതെ വെറുതെ മാർക്ക് നൽകുന്നു
- iv. അസൈൻമെന്റുകളും സെമിനാറുകളുമൊന്നും കൃത്യമായി വിലയിരുത്താറില്ല
- v. മറ്റുള്ളവ.....

36. നിങ്ങളുടെ എല്ലാ വിഷയങ്ങളും കൈകാര്യം ചെയ്യാൻ വേണ്ട അധ്യാപകർ ഉണ്ടോ? ഉണ്ട് ഇല്ല

37. ഏതെല്ലാം കാര്യങ്ങളിലാണ് അധ്യാപകർ നിങ്ങൾക്ക് കൃത്യമായ മാർഗ്ഗ നിർദ്ദേശങ്ങൾ തരാറുള്ളത്?

- i. പാഠ്യവിഷയങ്ങളിൽ
- ii. പാഠ്യേതര വിഷയങ്ങളിൽ
- iii. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

38. ഏതെല്ലാം രീതിയിലുള്ള പഠനപ്രവർത്തനങ്ങളാണ് നിങ്ങളുടെ ക്ലാസ്സിൽ നടക്കാറുള്ളത്?

- i. ചർച്ചകൾ
- ii. സെമിനാറുകൾ
- iii. കിസ് മത്സരങ്ങൾ
- iv. അസൈൻമെന്റുകൾ
- v. സംവാദങ്ങൾ
- vi. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

39. ക്ലാസ്സുകൾ കൈകാര്യം ചെയ്യുന്നതിന് അധ്യാപകർ ക്ലാസ്സിൽ ഏതെല്ലാം മാർഗ്ഗങ്ങളാണ് ഉപയോഗിക്കാറുള്ളത്?

- i. ലക്ചർ നടത്തുക
- ii. ലക്ചറിനോടൊപ്പം ദൃശ്യശ്രാവ്യ മാധ്യമങ്ങൾ ഉപയോഗിക്കുന്നു
- iii. നോട്ടുകൾ പറഞ്ഞു തരിക
- iv. സംഘം ചേർന്നുള്ള ചർച്ചകൾ
- v. ഫീൽഡ് വിസിറ്റുകൾ
- vi. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

40. വിവിധ തരത്തിലുള്ള ദൃശ്യശ്രാവ്യ മാധ്യമങ്ങൾ ഉപയോഗിച്ച് അധ്യാപകർ നിങ്ങൾക്ക് ക്ലാസ്സുകൾ എടുക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഉണ്ടെങ്കിൽ, ഇവയിലേതെല്ലാം അധ്യാപകർ ഉപയോഗിക്കാറുണ്ട്?

- i. കമ്പ്യൂട്ടർ
- ii. പ്രോജക്ടറുകൾ
- iii. ടിവി
- iv. മോഡലുകൾ
- v. മറ്റുള്ളവ

41. സൗഹൃദപരമായ ഒരു അധ്യാപക-വിദ്യാർത്ഥിബന്ധം നിങ്ങളുടെ സ്കൂളിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല

42. പഠനപ്രവർത്തനങ്ങളിൽ അധ്യാപകർ കാര്യക്ഷമമായ മേൽനോട്ടം വഹിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

43. പഠനപ്രക്രിയ സുഖകരമാക്കാൻ വേണ്ട മാർഗ്ഗനിർദ്ദേശങ്ങൾ കൃത്യമായി അധ്യാപകർ നൽകാറുണ്ടോ? ഉണ്ട് ഇല്ല

44. വിദ്യാർത്ഥികളുടെ പ്രശ്നപരിഹാരങ്ങൾക്കായി ഒരു കൗൺസിലറുടെ സേവനം നിങ്ങളുടെ സ്കൂളിൽ ലഭ്യമാണോ? ആണ് അല്ല

45. കൗൺസിലറുടെ സേവനം എന്തെല്ലാം കാര്യങ്ങളിൽ നിങ്ങൾക്ക് കിട്ടാറുണ്ട്?

- i. പഠന സംബന്ധിയായ പ്രശ്നപരിഹാരങ്ങൾക്ക്
- ii. വ്യക്തിപരമായ പ്രശ്നപരിഹാരങ്ങൾക്ക്
- iii. തൊഴിൽപരമായ പ്രശ്നപരിഹാരങ്ങൾക്ക്
- iv. മറ്റുള്ളവ.....

46. പ്രയോജനകരമായ ഒരു ജോലി സമ്പാദിക്കാൻ വേണ്ട കാര്യങ്ങളെ സംബന്ധിച്ച വ്യക്തിമായ അറിവ് ലഭ്യമാവുന്ന രീതിയിലുള്ള പരിശീലനപരിപാടികൾ നിങ്ങളുടെ സ്കൂളിൽ സംഘടിപ്പിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

ഉണ്ടെങ്കിൽ, അത്തരം പരിശീലന പരിപാടികളിൽ നിങ്ങൾ പങ്കെടുക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

47. പങ്കെടുത്ത പരിപാടികൾ കാര്യക്ഷമമായി തോന്നിയിട്ടുണ്ടോ? ഉണ്ട് ഇല്ല

48. താഴെ പറയുന്ന ഏതിലെല്ലാമാണ് നിങ്ങൾക്ക് അംഗത്വമുള്ളത്?

- i. എൻ.എസ്.എസ്
- ii. സൗഹൃദക്ലബ്ബ്

iii. ഭാഷാ ക്ലബ്ബ്

iv. ഗണിത ക്ലബ്ബ്

v. സാമൂഹ്യശാസ്ത്ര ക്ലബ്ബ്

vi. മറ്റുള്ളവ.....

49. ഹയർസെക്കന്ററി പഠനത്തിന് ഉപയോഗിക്കുന്ന പാഠപുസ്തകങ്ങളെക്കുറിച്ചുള്ള ചില പ്രസ്താവനകളാണ് താഴെ തന്നിരിക്കുന്നത്. അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക.

i. ലളിതമായ ഭാഷയിലാണ് പാഠപുസ്തകങ്ങൾ തയ്യാറാക്കിയിരിക്കുന്നത്

ii. ആവശ്യത്തിനുള്ള പരിശീലനപ്രശ്നങ്ങൾ നൽകിയിട്ടുണ്ട്

iii. പാഠഭാഗങ്ങൾ നല്ലരീതിയിൽ ക്രമീകരിച്ചിട്ടുണ്ട്

50. പാഠപുസ്തകങ്ങൾ തിരഞ്ഞെടുക്കാൻ നിങ്ങൾ സ്വീകരിക്കാനുള്ള മാർഗ്ഗങ്ങൾ. (അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക)

i. അധ്യാപകന്റെ നിർദ്ദേശപ്രകാരമുള്ള പുസ്തകങ്ങൾ മാത്രം കണ്ടെത്തി ഉപയോഗിക്കുന്നു

ii. ആധികാരികമായ ബുക്കുകൾ ഏതെന്ന് കണ്ടെത്തി ഉപയോഗിക്കുന്നു

iii. ലൈബ്രറിസൗകര്യം പ്രയോജനപ്പെടുത്തി ആവശ്യമായ ബുക്കുകൾ കണ്ടെത്തി ഉപയോഗിക്കുന്നു

iv. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

51. ഹയർസെക്കന്ററി പ്രവർത്തന സമയത്തിൽ വന്ന മാറ്റം ഗുണകരമാണെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

ഇല്ലെങ്കിൽ, ഏതെല്ലാം തരത്തിലുള്ള പ്രയാസങ്ങളാണ് സമയമാറ്റംവഴി നിങ്ങൾക്ക് അനുഭവപ്പെടുന്നത്. അനുയോജ്യമായത് തിരഞ്ഞെടുക്കുക.

i. തുടർച്ചയായുള്ള ക്ലാസ്സുകൾ മൂലം പഠനത്തോട് മടുപ്പ് അനുഭവപ്പെടുന്നു

ii. വിശ്രമസമയത്തിലെ കുറവ് മൂലം പ്രാഥമികാവശ്യങ്ങൾ നിറവേറ്റാൻ ബുദ്ധിമുട്ടനുഭവപ്പെടുന്നു

iii. യാത്രാ സംബന്ധമായ പ്രശ്നങ്ങൾ ഉണ്ടാവുന്നു

iv. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

52. ഹയർസെക്കന്ററിയുടെ പ്രവർത്തനസമയത്തിൽ നിന്ന് 'ശനിയാഴ്ച' ഒഴിവാക്കിയതിലൂടെ ആ ദിവസം നിങ്ങൾ എങ്ങനെയെല്ലാം പ്രയോജനപ്പെടുത്തുന്നു.

i. എൻട്രൻസ് പരിശീലനപരിപാടികളിൽ പങ്കെടുക്കാൻ ഉപയോഗിക്കുന്നു

ii. ഓരോ ആഴ്ചയിലേയും പഠനപ്രവർത്തനങ്ങൾ ക്രമീകരിക്കാൻ ഉപയോഗിക്കുന്നു

iii. ട്യൂഷൻ പഠനത്തിന് ഉപയോഗിക്കുന്നു

iv. തൊഴിൽ ചെയ്യാൻ പ്രയോജനപ്പെടുത്തുന്നു

v. അസാപിന്റെ പരിശീലനപരിപാടികളിൽ പങ്കെടുക്കുന്നു

vi. ലൈബ്രറി സൗകര്യം പ്രയോജനപ്പെടുത്തുന്നു

vii. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

53. ഹയർസെക്കന്ററി മേഖലയിൽ നടത്തിവരുന്ന ‘അസാപ്’ നിങ്ങളുടെ സ്കൂളിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല
- ഇല്ലെങ്കിൽ, അസാപിൽ നിങ്ങൾക്ക് അംഗത്വമുണ്ടോ? ഉണ്ട് ഇല്ല
54. അസാപ് കോഴ്സിലൂടെ നിങ്ങളുടെ വൈദഗ്ദ്ധ്യം വർദ്ധിപ്പിക്കാൻ സാധ്യമാണെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല
55. അസാപിൽ അംഗമായതുവഴി പഠനഭാരം കുടിയതായി തോന്നുന്നുണ്ടോ? ഉണ്ട് ഇല്ല
56. അസാപിലൂടെ വിഭാവനം ചെയ്ത തൊഴിൽ വൈദഗ്ദ്ധ്യം കാര്യക്ഷമമായി നേടാൻ കോഴ്സ് സഹായിക്കുമെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല
- ഇല്ലെങ്കിൽ, അസാപ് കോഴ്സിൽ നിങ്ങൾക്ക് അനുഭവപ്പെടുന്ന പോരായ്മകൾ (വ്യക്തമാക്കുക).
57. ഹയർ സെക്കണ്ടറി വിദ്യാഭ്യാസമേഖല മെച്ചപ്പെടുത്തുന്നതിനുള്ള താങ്കളുടെ നിർദ്ദേശങ്ങൾ രേഖപ്പെടുത്തുക.

Appendix IV

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT**

**QUESTIONNAIRE ON HIGHER SECONDARY EDUCATION SYSTEM
FOR HIGHER SECONDARY STUDENTS**

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Directions

I am a research scholar in Dept of education, Calicut University. The area of my research is higher secondary education in Kerala. For the purpose of this research I need some data from the higher secondary students in Kerala. So please go through the instructions and answer the questions provided. The data will be used for the research purpose and kept confidential.

Part A

Gender : Male/Female

Name of the School :

Course of Study :

Part B

1. Did you get admission to the desired course? Yes No
2. Did you likely to go for higher studies in the course you joined?
Yes No
3. The medium of instruction for high school:.....
4. Do you face any difficulties due to change of medium? Yes No
If yes, what sort of difficulties do you face
.....
.....
5. Do you try to clarify the doubts after the class room activities?
Yes No
6. Do you get the service of teachers properly to clarify your doubts?
Yes No

Instructions: The questions 7-31 are related to the infrastructural facility of your school. Tick the suitable responses.

7. Is your school library has sufficient for higher secondary students? Yes No
8. Does the library provide helpful information for your studies? Yes No
9. Do you utilise the library facility when time allows? Yes No
10. Do the teachers encourage utilization of library Yes No
11. What strategy is followed in your library for the distribution of books
- a. Teachers distributed
 - b. Students distributed
 - c. Librarian distributed
 - d. Do not distribute
 - e. Others

12. The difficulties you face in utilizing the library facility effectively (Tick the suitable response)
- a. Insufficiency of time
 - b. Ineffective functioning of library
 - c. Ignorance about the functioning of the library
 - d. Others

Instructions: The questions 13 to 18 are about utilization of laboratory facilities

13. Is the functioning of school laboratory effective? Yes No
14. Use the lab during the time allotted? Yes No
- If No, give reasons

.....
.....

15. Is there sufficient infrastructural facilities in the laboratory? Yes No
16. Is the service of a lab assistant available? Yes No
17. Do the teachers give you proper instructions for the practical sessions? Yes No
18. Are you satisfied with the functioning of the laboratory? Yes No
- If No, give reasons

.....
.....

Instructions: Questions 19 to 24 are for the students who study computer science or computer application. Make the responses suitably in your school

19. Is there any computer lab available in your school for higher secondary students? Yes No
20. Is the computer lab sufficiently equipped? Yes No
21. Is internet connection available in the lab? Yes No
22. Is the service of a computer instructor available in the lab? Yes No
23. Is time allotted sufficiently for utilization of computer lab? Yes No
24. Could you use the lab during the allotted time? Yes No

If No, why

.....
.....

25. Is the service of a physical education teacher available for you? Yes No
26. Do you participate in sports competition? Yes No

If Yes, which are the items

.....
.....

27. Is proper training available in school for the item you participate? Yes No

28. Do the teachers encourage you in participating sports competition? Yes No

29. Do you practice during the time allotted in the time table? Yes No

If No How do you utilise the time

.....
.....

30. Are sufficient toilet facilities available in your school for higher secondary students? Yes No

31. What are the inadequacies or shortcomings of the available toilet facilities? Yes No

32. Whether tests are conducted at the end of each lesson (Tick the relevant response)

1. For all subject
2. For some subjects
3. No

33. Will the teachers evaluate and give back the answer scripts in time? Yes No

34. Do you think it is necessary to conduct test to evaluate your academic achievement properly? Yes No

35. Do you think that the present evaluation system is effective? Yes No

If not , what are the reasons?

1. The teachers show partiality in evaluation

2. No practical tests are conducted

3. Teachers give scores without proper scoring indicators

4. Assignments and seminars are not evaluated properly

5. Others

36. Are teachers there for teaching all subjects? Yes No

37. In which areas do you get proper guidance from the teachers

1. Curricular

2. Co curricular

3. Others (Specify).....

38. What are the class room activities conducted in your classes?

1. Discussions

2. Seminars

3. Quiz competition

4. Assignment

5. Debates

6. Others (Specify)

39. What are the strategies adopted by your teacher

1. Lecturing

2. Use AV aids while lecturing

3. Dictate notes

4. Group discussions

5. Field visits

6. Others (Specify).....

40. Do the teachers use various AV aids in the classes? Yes No

If Yes, which are the following

1. Computer

2. Projector

3. TV

4. Models

5. Others (Specify).....

41. Is there a cordial teacher pupil relationship maintained in your school?
42. Do the teachers supervise the learning activities effectively?
43. Do the teachers provide proper guidance in making the learning process easy?
44. Is the service of a counselor available in your school to attend the issues related to students?
45. Which of the following area do you get the service of the counselor?
1. To solve the issues related to learning
 2. To solve personal issues
 3. To solve vocational issues
 4. Others.....
46. Does your school organize various job oriented training programmes? Yes No
- If Yes, do you participate in such programmes? Yes No
47. Did you feel the programmes you attended were effective? Yes No
48. Do you have membership in any of the following
1. NSS
 2. Souhrida club
 3. Language club
 4. Maths club
 5. Social science club
 6. Any other.....
49. Following are some of the statement on the text books issued in higher secondary classes. Tick on the appropriate statement
1. The text books are in simple language
 2. Sufficient illustrations are provided
 3. Contents were properly arranged
50. How do you select the books(Tick the appropriate one)
1. Use only the books suggested by the teacher
 2. Find out authentic books and use of them
 3. Select suitable books from the library
 4. Others (Specify).....
51. Do you think the change of working hours in the higher secondary level are beneficial
- If Not, what sort of difficulties do you face. Tick the appropriate
1. Continuous classes result in boredom
 2. Face difficulties in doing the primary needs due to the shortage of interval time
 3. Faces problems related to conveyance
 4. Others(Specify).....

52. How do you utilise Saturday since it is made a holiday for higher secondary

1. Attends entrance coaching classes
2. Utilise to organize the week's learning activities
3. Attends tuition classes
4. Engage in activities for earning
5. Participates in ASAP programme
6. Utilises library facilities
7. Others (Specify).....

53. Is ASAP programme for higher secondary schools available in your school?

Yes No

If Yes, have you joined in ASAP

Yes No

54. Do you think that your skills can be developed through ASAP courses

Yes No

55. Do you think participating in ASAP burdened your studies

Yes No

56. Do you think the professional skills envisaged by ASAP can be effectively achieved through ASAP courses

Yes No

If No, what are the demerits of the ASAP course (Explain)

57. Give suggestions to improve higher secondary education system.

Appendix V

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT

QUESTIONNAIRE ON VOCATIONAL HIGHER SECONDARY EDUCATION
SYSTEM FOR VOCATIONAL HIGHER SECONDARY STUDENTS

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

നിർദ്ദേശങ്ങൾ

കാലിക്കറ്റ് സർവ്വകലാശാല വിദ്യാഭ്യാസ വിഭാഗത്തിലെ ഗവേഷകയാണ് ഞാൻ. കേരളത്തിലെ വൊക്കേഷണൽ ഹയർസെക്കന്ററി വിദ്യാഭ്യാസ മേഖലയെ കുറിച്ച് ഒരു ഗവേഷണം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. എന്റെ ഗവേഷണാവശ്യത്തിനായി കേരളത്തിലെ വൊക്കേഷണൽ ഹയർസെക്കന്ററി വിദ്യാർത്ഥികളിൽനിന്ന് കുറച്ച് വസ്തുതകൾ ആവശ്യമായി വന്നിരിക്കുന്നു. ആയതിനാൽ ദയവായി ഇതോടൊപ്പമുള്ള ചോദ്യാവലി നിർദ്ദേശങ്ങളനുസരിച്ച് പൂരിപ്പിച്ച് നൽകുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ എന്റെ ഗവേഷണത്തിനു വേണ്ടി മാത്രം ഉപയോഗിക്കുന്നതാണ്.

ലിംഗം : ആൺ/പെൺ

പഠിക്കുന്ന വിദ്യാലയം :

പഠിക്കുന്ന കോഴ്സ് :

1. നിങ്ങളുടെ ഇഷ്ടാനുസരണമുള്ള കോഴ്സിൽതന്നെ ഹയർസെക്കന്ററിക്ക് പ്രവേശനം ലഭിച്ചോ? ഉണ്ട് ഇല്ല
2. ലഭിച്ച കോഴ്സിൽതന്നെ ഉന്നത പഠനം നടത്താൻ നിങ്ങൾക്ക് താല്പര്യമുണ്ടോ? ഉണ്ട് ഇല്ല
3. ജീവിത വൃത്തിയിലേക്ക് നയിക്കുന്ന വിജ്ഞാനം പ്രദാനം ചെയ്യുക എന്ന ലക്ഷ്യം നേടുന്നതിന് വൊക്കേഷണൽ ഹയർസെക്കന്ററി പഠനം നിങ്ങളെ സഹായിക്കുമെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല
4. വൊക്കേഷണൽ ഹയർസെക്കന്ററി കോഴ്സ് തിരഞ്ഞെടുക്കാൻ നിങ്ങളെ പ്രേരിപ്പിച്ച ഘടകങ്ങൾ
 - i. തൊഴിലധിഷ്ഠിതകോഴ്സുകൾ കൂടുതൽ ഗുണകരമാണെന്ന് കരുതുന്നതുകൊണ്ട്
 - ii. ഹയർസെക്കന്ററിയിൽ പ്രവേശനം ലഭിക്കാത്തത്
 - iii. വീടിനടുത്ത് പഠിക്കാനവസരം കിട്ടിയത്
 - iv. രക്ഷിതാവിന്റെ നിർബന്ധം കാരണം
 - v. കോഴ്സിനുശേഷം ജോലി സാധ്യത ഉണ്ടെന്നറിഞ്ഞത്
 - vi. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

5. വൊക്കേഷണൽ ഹയർസെക്കന്ററി പഠനം പൂർത്തീകരിച്ചതിനുശേഷം നിങ്ങളുടെ ഭാവി പരിപാടി

- i. ഈ മേഖലയിൽ തന്നെ ഉന്നതപഠനം നടത്തുക
- ii. പഠിച്ച തൊഴിൽ വൈദഗ്ദ്ധ്യമനുസരിച്ചുള്ള ജോലിയിൽ പ്രവേശിക്കുക
- iii. മറ്റേതെങ്കിലും ഡിഗ്രി കോഴ്സിൽ ചേർന്ന് പഠിക്കുക
- iv. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

6. ഇപ്പോൾ പഠിച്ചുകൊണ്ടിരിക്കുന്ന വൊക്കേഷണൽ കോഴ്സിൽ തന്നെ ഉന്നത പഠനത്തിന് ധാരാളം അവസരമുണ്ടെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

7. പഠിച്ച കോഴ്സിനനുസരിച്ചുള്ള തൊഴിലിൽ പ്രവേശിക്കാൻ താല്പര്യമുണ്ടോ? ഉണ്ട് ഇല്ല

ഇല്ലെങ്കിൽ, അതിനുള്ള കാരണം വ്യക്തമാക്കുക

- i. വേണ്ടത്ര തൊഴിൽ പരിചയം കോഴ്സിലൂടെ ലഭ്യമായിട്ടില്ല
- ii. താല്പര്യമില്ലാത്ത തൊഴിൽ മേഖലയായതുകൊണ്ട്
- iii. കാലഹരണപ്പെട്ട കോഴ്സായതുകൊണ്ട്
- iv. മേഖലയിൽ തൊഴിൽ സാധ്യത കുറവാണ്
- v. സമൂഹത്തിൽ ഈ കോഴ്സിന് അന്തസ് കുറവായതുകൊണ്ട്
- vi. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

8. ഹൈസ്കൂൾ പഠനകാലയളവിലെ പഠനമാധ്യമം
മലയാളം ഇംഗ്ലീഷ് മറ്റുള്ളവ

9. പഠനമാധ്യമത്തിലെ മാറ്റം ഹയർസെക്കന്ററി പഠനത്തിന് ബുദ്ധിമുട്ട് ഉണ്ടാക്കുന്നുണ്ടോ? ഉണ്ട് ഇല്ല
ഉണ്ടെങ്കിൽ, ഏതെല്ലാം തരത്തിലുള്ള പ്രയാസങ്ങളാണ് നിങ്ങൾക്ക് അനുഭവപ്പെടുന്നത്.....

10. ക്ലാസ്സിൽ നടക്കുന്ന പഠനപ്രക്രിയകളിലൂടെ മനസിലാവാത്ത ഭാഗങ്ങൾ വ്യക്തമായി മനസിലാക്കാൻ വേണ്ടി നിങ്ങൾ സംശയനിവാരണം നടത്താറുണ്ടോ? ഉണ്ട് ഇല്ല

11. സംശയനിവാരണം നടത്തുന്നതിന് അധ്യാപകരുടെ സേവനം വേണ്ടവിധം ലഭ്യമാവാറുണ്ടോ? ഉണ്ട് ഇല്ല

നിർദ്ദേശങ്ങൾ: താഴെ തന്നിരിക്കുന്ന 7 മുതൽ 31 വരെയുള്ള ചോദ്യങ്ങൾ നിങ്ങളുടെ സ്കൂളിലെ ഭൗതിക സൗകര്യങ്ങളെ സംബന്ധിച്ചുള്ളതാണ് അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക.

12. നിങ്ങളുടെ സ്കൂളിൽ ഹയർ സെക്കന്ററി കുട്ടികൾക്കുള്ള ലൈബ്രറി സൗകര്യം പര്യാപ്തമാണോ? ആണ് അല്ല

13. നിങ്ങളുടെ പഠനത്തിനുപകരിക്കുന്ന എല്ലാ വിവരങ്ങളും ലൈബ്രറിയിൽ ലഭ്യമാവാറുണ്ടോ? ഉണ്ട് ഇല്ല

14. ലഭ്യമാവുന്ന സമയങ്ങളിലൊക്കെ ലൈബ്രറി സൗകര്യം പ്രയോജനപ്പെടുത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
15. ലൈബ്രറി സൗകര്യം പ്രയോജനപ്പെടുത്താൻ വേണ്ടിയുള്ള പ്രോത്സാഹനം അധ്യാപകർ നൽകാറുണ്ടോ? ഉണ്ട് ഇല്ല
16. ലൈബ്രറി ബുക്കുകൾ വിതരണം ചെയ്യുവാൻ ഏത് രീതിയാണ് നിങ്ങളുടെ സ്കൂളിൽ സ്വീകരിക്കാറുള്ളത്? (അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക)
 - i. അധ്യാപകർ വിതരണം ചെയ്യുന്നു
 - ii. വിദ്യാർത്ഥികൾ വിതരണം ചെയ്യുന്നു
 - iii. ലൈബ്രറിയൻ വിതരണം ചെയ്യുന്നു
 - iv. വിതരണം ചെയ്യാറില്ല
 - v. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....
17. ലൈബ്രറി സൗകര്യം കാര്യക്ഷമായി പ്രയോജനപ്പെടുത്തുന്നതിൽ നിങ്ങൾ നേരിടുന്ന പ്രയാസങ്ങൾ (അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക).
 - i. സമയത്തിന്റെ അപര്യാപ്തത
 - ii. കാര്യക്ഷമമായ ലൈബ്രറി പ്രവർത്തനത്തിന്റെ അഭാവം
 - iii. ലൈബ്രറി പ്രവർത്തനത്തെ കുറിച്ചുള്ള അറിവില്ലായ്മ
 - iv. മറ്റുള്ളവ.....

നിർദ്ദേശങ്ങൾ: താഴെ തന്നിരിക്കുന്ന 13 മുതൽ 18 വരെയുള്ള ചോദ്യങ്ങൾ ലാബ് സൗകര്യം പ്രയോജനപ്പെടുത്താറുള്ള വിദ്യാർത്ഥികളെ സംബന്ധിച്ചുള്ളതാണ്.

18. നിങ്ങളുടെ സ്കൂളിൽ ലാബിന്റെ പ്രവർത്തനം കാര്യക്ഷമമായി നടത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
19. അനുവദിച്ചിട്ടുള്ള സമയങ്ങളിലെല്ലാം ലാബ് സൗകര്യം പ്രയോജനപ്പെടുത്താറുണ്ടോ? ഉണ്ട് ഇല്ല
 'ഇല്ല' എങ്കിൽ കാരണം വ്യക്തമാക്കുക.
20. ലാബ് സൗകര്യം പ്രയോജനപ്പെടുത്താൻ വേണ്ട ഭൗതിക സൗകര്യങ്ങളെല്ലാം നിങ്ങളുടെ ലാബിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല
21. ലാബ് സൗകര്യം ഉപയോഗിക്കുമ്പോൾ ലാബ് അസിസ്റ്റന്റിന്റെ സേവനം നിങ്ങൾക്ക് ലഭിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
22. പ്രാക്ടിക്കൽ ചെയ്യുന്നതിന് അധ്യാപകർ കൃത്യമായ മാർഗ്ഗനിർദ്ദേശങ്ങൾ നൽകാറുണ്ടോ? ഉണ്ട് ഇല്ല
23. ലാബിന്റെ നിലവിലെ പ്രവർത്തനത്തിൽ നിങ്ങൾ തൃപ്തനാണോ? അതെ അല്ല
 അല്ലെങ്കിൽ, കാരണങ്ങൾ വ്യക്തമാക്കുക.

നിർദ്ദേശങ്ങൾ: താഴെ തന്നിരിക്കുന്ന 24 മുതൽ 29 വരെയുള്ള ചോദ്യങ്ങൾ കമ്പ്യൂട്ടർ ഒരു പഠനമേഖലയായി വരുന്ന വിദ്യാർത്ഥികളെ ഉദ്ദേശിച്ചുള്ളവയാണ്. അനുയോജ്യമായ രീതിയിൽ അടയാളപ്പെടുത്തുക.

24. ഹയർ സെക്കന്ററി വിദ്യാർത്ഥികൾക്ക് പ്രയോജനം ലഭിക്കുന്ന രീതിയിൽ ഒരു കമ്പ്യൂട്ടർ ലാബ് നിങ്ങളുടെ സ്കൂളിൽ പ്രവർത്തിക്കുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

25. ആവശ്യത്തിനുള്ള സൗകര്യങ്ങൾ കമ്പ്യൂട്ടർ ലാബിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല
26. ഇന്റർനെറ്റ് സൗകര്യം കമ്പ്യൂട്ടർ ലാബിൽ ലഭ്യമാണോ? ഉണ്ട് ഇല്ല
27. കമ്പ്യൂട്ടർ ഇൻസ്ട്രക്ടറിന്റെ സേവനം ലാബിൽ നിങ്ങൾക്ക് ലഭിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
28. കമ്പ്യൂട്ടർ ലാബ് ഉപയോഗിക്കാൻ പ്രത്യേക സമയം അനുവദിച്ചിട്ടുണ്ടോ? ഉണ്ട് ഇല്ല
29. അനുവദിച്ചിട്ടുള്ള സമയങ്ങളിൽ കമ്പ്യൂട്ടർ ലാബ് ഉപയോഗപ്പെടുത്താൻ സാധിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഇല്ലെങ്കിൽ, അതിനുള്ള കാരണങ്ങൾ വിശദമാക്കുക.
30. കായികാധ്യാപകന്റെ സേവനം നിങ്ങൾക്ക് കായിക പരിശീലനത്തിന് ലഭിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
31. നിങ്ങൾ കായിക മത്സരങ്ങളിൽ പങ്കെടുക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഉണ്ടെങ്കിൽ, ഏതിനങ്ങളിൽ?
32. പങ്കെടുക്കുന്ന കായിക ഇനങ്ങൾക്ക് വേണ്ടിയുള്ള പരിശീലനം സ്കൂളിൽ നിന്ന് കിട്ടാറുണ്ടോ? ഉണ്ട് ഇല്ല
33. കായിക മത്സരങ്ങളിൽ പങ്കെടുക്കാൻ വേണ്ടി അധ്യാപകർ നിങ്ങളെ പ്രോത്സാഹിപ്പിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല
34. ടൈം ടേബിൾ പ്രകാരം അനുവദിച്ച സമയങ്ങളിൽ കായിക പരിശീലനത്തിന് അവസരം കിട്ടാറുണ്ടോ? ഉണ്ട് ഇല്ല
ഇല്ലെങ്കിൽ, ആ സമയം എങ്ങനെയെല്ലാം വിനിയോഗിക്കുന്നു (വ്യക്തമാക്കുക)
35. വൊക്കേഷണൽ ഹയർസെക്കന്ററി വിദ്യാർത്ഥികൾക്ക് ആവശ്യാനുസരണമുള്ള ടോയ്ലറ്റ് സൗകര്യം നിങ്ങളുടെ സ്കൂളിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല
36. നിങ്ങൾക്ക് ലഭ്യമായിട്ടുള്ള ടോയ്ലറ്റ് സൗകര്യത്തിന്റെ പോരായ്മകൾ വ്യക്തമാക്കുക.
37. ഓരോ പാഠഭാഗം കഴിയുമ്പോഴും യൂണിറ്റ് ടെസ്റ്റുകൾ നടത്താറുണ്ടോ?
 i. എല്ലാവിഷയങ്ങൾക്കും നടത്താറുണ്ട്
 ii. ചില വിഷയങ്ങൾക്ക് മാത്രം നടത്താറുണ്ട്
 iii. നടത്താറില്ല
38. മൂല്യനിർണ്ണയം കഴിഞ്ഞ ഉത്തരപേപ്പറുകൾ അധ്യാപകർ യഥാസമയം തിരിച്ചു തരാറുണ്ടോ? ഉണ്ട് ഇല്ല
39. നിങ്ങളുടെ അക്കാദമിക മികവ് എത്രയെന്ന് യഥാസമയം കണ്ടെത്തുന്നതിന് വേണ്ടി കൂടുതൽ പരീക്ഷകൾ നടത്തണമെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

40. നിലവിൽ നിങ്ങളെ വിലയിരുത്തുന്ന രീതി കാര്യക്ഷമമാണെന്ന് കരുതുന്നുണ്ടോ? ഉണ്ട് ഇല്ല

ഇല്ലെങ്കിൽ, കാരണങ്ങൾ അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക.

- i. മൂല്യനിർണ്ണയത്തിൽ അധ്യാപകർ പക്ഷപാതപരമായ സമീപനം കാണിക്കുന്നു
- ii. പ്രാക്ടിക്കൽ പരീക്ഷകൾ കാര്യക്ഷമമായി നടക്കാറില്ല
- iii. അധ്യാപകർ പ്രത്യേക മാനദണ്ഡങ്ങളൊന്നുമില്ലാതെ വെറുതെ മാർക്ക് നൽകുന്നു
- iv. അസൈൻമെന്റുകളും സെമിനാറുകളുമൊന്നും കൃത്യമായി വിലയിരുത്താറില്ല
- v. മറ്റുള്ളവ.....

41. നിങ്ങളുടെ എല്ലാ വിഷയങ്ങളും കൈകാര്യം ചെയ്യാൻ വേണ്ട അധ്യാപകർ ഉണ്ടോ? ഉണ്ട് ഇല്ല

42. ഏതെല്ലാം കാര്യങ്ങളിലാണ് അധ്യാപകർ നിങ്ങൾക്ക് കൃത്യമായ മാർഗ്ഗ നിർദ്ദേശങ്ങൾ തരാറുള്ളത്?

- i. പാഠ്യവിഷയങ്ങളിൽ
- ii. പാഠ്യേതര വിഷയങ്ങളിൽ
- iii. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

43. ഏതെല്ലാം രീതിയിലുള്ള പഠനപ്രവർത്തനങ്ങളാണ് നിങ്ങളുടെ ക്ലാസ്സിൽ നടക്കാറുള്ളത്?

- i. ചർച്ചകൾ
- ii. സെമിനാറുകൾ
- iii. കിസ് മത്സരങ്ങൾ
- iv. അസൈൻമെന്റുകൾ
- v. സംവാദങ്ങൾ
- vi. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

44. ക്ലാസ്സുകൾ കൈകാര്യം ചെയ്യുന്നതിന് അധ്യാപകർ ക്ലാസ്സിൽ ഏതെല്ലാം മാർഗ്ഗങ്ങളാണ് ഉപയോഗിക്കാറുള്ളത്?

- i. ലക്ചർ നടത്തുക
- ii. ലക്ചറിനോടൊപ്പം ദൃശ്യശ്രാവ്യ മാധ്യമങ്ങൾ ഉപയോഗിക്കുന്നു
- iii. നോട്ടുകൾ പറഞ്ഞു തരിക
- iv. സംഘം ചേർന്നുള്ള ചർച്ചകൾ
- v. ഫീൽഡ് വിസിറ്റുകൾ
- vi. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

45. വിവിധ തരത്തിലുള്ള ദൃശ്യശ്രാവ്യ മാധ്യമങ്ങൾ ഉപയോഗിച്ച് അധ്യാപകർ നിങ്ങൾക്ക് ക്ലാസ്സുകൾ എടുക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

ഉണ്ടെങ്കിൽ, ഇവയിലേതെല്ലാം അധ്യാപകർ ഉപയോഗിക്കാറുണ്ട്?

- i. കമ്പ്യൂട്ടർ
- ii. പ്രോജക്ടറുകൾ

iii. ടിവി

iv. മോഡലുകൾ

v. മറ്റുള്ളവ

46. സൗഹൃദപരമായ ഒരു അധ്യാപക-വിദ്യാർത്ഥിബന്ധം നിങ്ങളുടെ സ്കൂളിൽ ഉണ്ടോ? ഉണ്ട് ഇല്ല

47. പഠനപ്രവർത്തനങ്ങളിൽ അധ്യാപകർ കാര്യക്ഷമമായ മേൽനോട്ടം വഹിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

48. പഠനപ്രക്രിയ സുഖകരമാക്കാൻ വേണ്ട മാർഗ്ഗനിർദ്ദേശങ്ങൾ കൃത്യമായി അധ്യാപകർ നൽകാറുണ്ടോ? ഉണ്ട് ഇല്ല

49. വിദ്യാർത്ഥികളുടെ പ്രശ്നപരിഹാരങ്ങൾക്കായി ഒരു കൗൺസിലറുടെ സേവനം നിങ്ങളുടെ സ്കൂളിൽ ലഭ്യമാണോ? ആണ് അല്ല

50. കൗൺസിലറുടെ സേവനം എത്രത്തോളം കാര്യങ്ങളിൽ നിങ്ങൾക്ക് കിട്ടാറുണ്ട്?

i. പഠന സംബന്ധിയായ പ്രശ്നപരിഹാരങ്ങൾക്ക്

ii. വ്യക്തിപരമായ പ്രശ്നപരിഹാരങ്ങൾക്ക്

iii. തൊഴിൽപരമായ പ്രശ്നപരിഹാരങ്ങൾക്ക്

iv. മറ്റുള്ളവ.....

51. പ്രയോജനകരമായ ഒരു ജോലി സമ്പാദിക്കാൻ വേണ്ട കാര്യങ്ങളെ സംബന്ധിച്ച വ്യക്തിമായ അറിവ് ലഭ്യമാവുന്ന രീതിയിലുള്ള പരിശീലനപരിപാടികൾ നിങ്ങളുടെ സ്കൂളിൽ സംഘടിപ്പിക്കാറുണ്ടോ? ഉണ്ട് ഇല്ല

ഉണ്ടെങ്കിൽ, അത്തരം പരിശീലന പരിപാടികളിൽ നിങ്ങൾ പങ്കെടുക്കാറുണ്ടോ?

ഉണ്ട് ഇല്ല

52. പങ്കെടുത്ത പരിപാടികൾ കാര്യക്ഷമമായി തോന്നിയിട്ടുണ്ടോ? ഉണ്ട് ഇല്ല

53. താഴെ പറയുന്ന ഏതിലെല്ലാമാണ് നിങ്ങൾക്ക് അംഗത്വമുള്ളത്?

i. എൻ.എസ്.എസ്

ii. സൗഹൃദക്ലബ്ബ്

iii. ഭാഷാ ക്ലബ്ബ്

iv. ഗണിത ക്ലബ്ബ്

v. സാമൂഹ്യശാസ്ത്ര ക്ലബ്ബ്

vi. മറ്റുള്ളവ.....

54. വൊക്കേഷണൽ ഹയർസെക്കന്ററി പഠനത്തിന് ഉപയോഗിക്കുന്ന പാഠപുസ്തകങ്ങളെക്കുറിച്ചുള്ള ചില പ്രസ്താവനകളാണ് താഴെ തന്നിരിക്കുന്നത്. അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക.

i. ലളിതമായ ഭാഷയിലാണ് പാഠപുസ്തകങ്ങൾ തയ്യാറാക്കിയിരിക്കുന്നത്

ii. ആവശ്യത്തിനുള്ള പരിശീലനപ്രശ്നങ്ങൾ നൽകിയിട്ടുണ്ട്

iii. പാഠഭാഗങ്ങൾ നല്ലരീതിയിൽ ക്രമീകരിച്ചിട്ടുണ്ട്

55. പാഠപുസ്തകങ്ങൾ തെരഞ്ഞെടുക്കാൻ നിങ്ങൾ സ്വീകരിക്കാനുള്ള മാർഗ്ഗങ്ങൾ.
(അനുയോജ്യമായത് അടയാളപ്പെടുത്തുക)

- i. അധ്യാപകന്റെ നിർദ്ദേശപ്രകാരമുള്ള പുസ്തകങ്ങൾ മാത്രം കണ്ടെത്തി ഉപയോഗിക്കുന്നു
- ii. ആധികാരികമായ ബുക്കുകൾ ഏതെന്ന് കണ്ടെത്തി ഉപയോഗിക്കുന്നു
- iii. ലൈബ്രറിസൗകര്യം പ്രയോജനപ്പെടുത്തി ആവശ്യമായ ബുക്കുകൾ കണ്ടെത്തി ഉപയോഗിക്കുന്നു
- iv. മറ്റുള്ളവ (വ്യക്തമാക്കുക).....

56. വൊക്കേഷണൽ ഹയർ സെക്കണ്ടറി വിദ്യാഭ്യാസമേഖല മെച്ചപ്പെടുത്തുന്നതിനുള്ള താങ്കളുടെ നിർദ്ദേശങ്ങൾ രേഖപ്പെടുത്തുക.

Appendix V

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT**

**QUESTIONNAIRE ON VOCATIONAL HIGHER SECONDARY EDUCATION
SYSTEM FOR VOCATIONAL HIGHER SECONDARY STUDENTS**

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Directions

I am a research scholar in Dept of education, Calicut University. The area of my research is vocational higher secondary education in Kerala. For the purpose of this research I need some data from the vocational higher secondary students in Kerala. So please go through the instructions and answer the questions provided. The data will be used for the research purpose and kept confidential.

Part A

Gender : Male/Female

Name of the School :

Course of Study :

Part B

1. Did you get admission to the desired course? Yes No

2. Did you likely to go for higher studies in the course you joined?
Yes No

3. The medium of instruction for high school:.....

4. Do you face any difficulties due to change of medium? Yes No
If yes, what sort of difficulties do you face

.....
.....

5. Do you try to clarify the doubts after the class room activities?
Yes No

6. Do you get the service of teachers properly to clarify your doubts?
Yes No

7. Do you think the vocational higher secondary course will help you to achieve job oriented knowledge? Yes No
8. What are the factors that encouraged you opt vocational higher secondary course (Tick the relevant one)
1. Vocational courses are more beneficial
 2. Didn't get admission to higher secondary
 3. Facility to study near the residence
 4. Compulsion of the parents
 5. Job opportunities after the course
 6. Others (Specify)
9. What are your future plan after vocational higher secondary studies
1. Continue higher studies in the field
 2. Find a job suitable for the skills achieved
 3. Join any other degree course
 4. Others (Specify)
10. Do you think there is scope for higher studies in your area of study? Yes No
11. Are you interested in working in the area of your study? Yes No
- If Not, Specify the reasons
-
-

Instructions: The questions 12-36 are related to the infrastructural facility of your school. Tick the suitable responses.

12. Is your school library has sufficient for higher secondary students? Yes No
13. Does the library provide helpful information for your studies? Yes No
14. Do you utilise the library facility when time allows? Yes No
15. Do the teachers encourage utilization of library Yes No
16. What strategy is followed in your library for the distribution of books
- a. Teachers distributed
 - b. Students distributed
 - c. Librarian distributed
 - d. Do not distribute
 - e. Others

17. The difficulties you face in utilizing the library facility effectively (Tick the suitable response)

- a. Insufficiency of time
- b. Ineffective functioning of library
- c. Ignorance about the functioning of the library
- d. Others

Instructions: The questions 18 to 23 are about utilization of laboratory facilities

18. Is the functioning of school laboratory effective? Yes No

19. Use the lab during the time allotted? Yes No

If No, give reasons

.....
.....

20. Is there sufficient infrastructural facilities in the laboratory?

Yes No

21. Is the service of a lab assistant available?

Yes No

22. Do the teachers give you proper instructions for the practical sessions?

Yes No

23. Are you satisfied with the functioning of the laboratory? Yes No

If No, give reasons

.....
.....

Instructions: Questions 24 to 29 are for the students who study computer science or computer application. Make the responses suitably in your school

24. Is there any computer lab available in your school for higher secondary students?

Yes No

25. Is the computer lab sufficiently equipped?

Yes No

26. Is internet connection available in the lab?

Yes No

27. Is the service of a computer instructor available in the lab? Yes No

28. Is time allotted sufficiently for utilization of computer lab? Yes No

29. Could you use the lab during the allotted time? Yes No

If No, why

.....
.....

30. Is the service of a physical education teacher available for you? Yes No

31. Do you participate in sports competition? Yes No
If Yes, which are the items

32. Is proper training available in school for the item you participate? Yes No

33. Do the teachers encourage you in participating sports competition? Yes No

34. Do you practice during the time allotted in the time table? Yes No
If No How do you utilise the time

35. Are sufficient toilet facilities available in your school for higher secondary students? Yes No

36. What are the inadequacies or shortcomings of the available toilet facilities? Yes No

37. Whether tests are conducted at the end of each lesson (Tick the relevant response)

- 1. For all subject
- 2. For some subjects
- 3. No

38. Will the teachers evaluate and give back the answer scripts in time? Yes No

39. Do you think it is necessary to conduct test to evaluate your academic achievement properly? Yes No

40. Do you think that the present evaluation system is effective? Yes No

If not , what are the reasons?

- 1. The teachers show partiality in evaluation
- 2. No practical tests are conducted
- 3. Teachers give scores without proper scoring indicators
- 4. Assignments and seminars are not evaluated properly
- 5. Others

41. Are teachers there for teaching all subjects? Yes No

42. In which areas do you get proper guidance from the teachers

- 1. Curricular
- 2. Co curricular
- 3. Others (Specify).....

43. What are the class room activities conducted in your classes?

- 1. Discussions
- 2. Seminars
- 3. Quiz competition
- 4. Assignment
- 5. Debates
- 6. Others (Specify)

44. What are the strategies adopted by your teacher

- 1. Lecturing
- 2. Use AV aids while lecturing
- 3. Dictate notes
- 4. Group discussions
- 5. Field visits
- 6. Others (Specify).....

45. Do the teachers use various AV aids in the classes? Yes No

If Yes, which are the following

- 1. Computer
- 2. Projector
- 3. TV
- 4. Models
- 5. Others (Specify).....

46. Is there a cordial teacher pupil relationship maintained in your school?

47. Do the teachers supervise the learning activities effectively?

48. Do the teachers provide proper guidance in making the learning process easy?

49. Is the service of a counselor available in your school to attend the issues related to students?

50. Which of the following area do you get the service of the counselor?

- 1. To solve the issues related to learning
- 2. To solve personal issues
- 3. To solve vocational issues
- 4. Others.....

51. Does your school organize various job oriented training programmes?

Yes No

If Yes, do you participate in such programmes?

Yes No

52. Did you feel the programmes you attended were effective? Yes No

53. Do you have membership in any of the following

- 1. NSS

- 2. Souhrida club
- 3. Language club
- 4. Maths club
- 5. Social science club
- 6. Any other.....

54. Following are some of the statement on the text books issued in higher secondary classes. Tick on the appropriate statement

- 1. The text books are in simple language
- 2. Sufficient illustrations are provided
- 3. Contents were properly arranged

55. How do you select the books(Tick the appropriate one)

- 1. Use only the books suggested by the teacher
- 2. Find out authentic books and use of them
- 3. Select suitable books from the library
- 4. Others (Specify).....

56. Give suggestions to improve vocational higher secondary education system.

Appendix VI

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT**

**OBSERVATION SCHEDULE ON FACILITIES IN
HIGHER SECONDARY SCHOOLS**

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Name of the school :.....

Revenue district :.....

Educational district :.....

Locality :.....

Type of Management: Govt./Aided/Unaided

Classroom

Permanent Partition: : Yes/ No

Adequate area : Yes/No

No of students accommodated:.....

Lighting facility : Adequate/ Inadequate

Ventilation : Adequate/Inadequate

Fans : Adequate/Inadequate

Furniture : Adequate/Inadequate

Limitations :.....

Library

Working hours :.....

Service of librarian : Yes/No

Separate reading room : Yes/No

Facilities : Adequate/Inadequate

Furniture : Adequate/Inadequate

Limitations :

.....

Laboratory

Time for lab work :
Separate laboratory for each stream: Yes/No
Service of laboratory assistant : Yes/No
Facilities available : Adequate/Inadequate

Computer lab facilities

Service of lab instructor : Yes/No
Well equipped lab : Yes/No
Separate lab for higher secondary students: Yes/No
Facilities : Adequate/Inadequate

Physical education facilities

Play ground
Sports and games materials : Adequate/ Inadequate

Principals room

Separate room : Yes/ No
Furniture : Adequate/Inadequate

Office room

Attached with principals room : Yes/No
Electrified : Yes/No
Furniture : Adequate/Inadequate
Internet connection : Yes/ No

Staff room

Electrified : Yes/No
Furniture : Adequate/Inadequate
Writing Facilities : Adequate/Inadequate
Book keeping Facilities : Adequate/Inadequate
Document keeping facilities : Adequate/Inadequate
Availability of space : Adequate/Inadequate
Air circulation : Adequate/Inadequate

Store room

Storing facilities : Yes/No

Students restroom

Rest room : Yes/No
Toilet facilities : Adequate/Inadequate
Water supply in toilets : Adequate/Inadequate
Proper maintenance of toilets : Yes/No

Appendix VII

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT**

**OBSERVATION SCHEDULE ON FACILITIES IN
VOCATIONAL HIGHER SECONDARY SCHOOLS**

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Name of the school :

Revenue district :

Educational district :

Locality :

Type of Management : Govt./Aided/Unaided

Class room

Permanent partition : Yes/ No

Adequate area : Yes/No

No of students accommodated:

Lighting facility : Adequate/ Inadequate

Ventilation : Adequate/Inadequate

Fans : Adequate/Inadequate

Furniture : Adequate/Inadequate

Limitations

Library

Working hours :

Service of librarian : Yes/No

Separate reading room : Yes/No

Facilities : Adequate/Inadequate

Furniture : Adequate/Inadequate

Limitations :

Laboratory

Time for lab work :

Separate laboratory for each stream: Yes/No

Service of laboratory assistant : Yes/No

Facilities available : Adequate/Inadequate

Computer lab facilities

- Service of lab instructor : Yes/No
Well equipped lab : Yes/No
Separate lab for higher secondary students: Yes/No
Facilities : Adequate/Inadequate

Physical education facilities

- Play ground
Sports and games materials : Adequate/ Inadequate

Principals room

- Separate room : Yes/ No
Furniture : Adequate/Inadequate

Office room

- Attached with principals room : Yes/No
Electrified : Yes/No
Furniture : Adequate/Inadequate
Internet connection : Yes/ No

Staff room

- Electrified : Yes/No
Furniture : Adequate/Inadequate
Writing Facilities : Adequate/Inadequate
Book keeping Facilities : Adequate/Inadequate
Document keeping facilities Adequate/Inadequate
Availability of space : Adequate/Inadequate
Air circulation : Adequate/Inadequate

Store room

- Storing facilities : Yes/No

Students restroom

- Rest room : Yes/No
Toilet facilities : Adequate/Inadequate
Water supply in toilets : Adequate/Inadequate
Proper maintenance of toilets : Yes/No

Appendix VIII

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

INTERVIEW SCHEDULE TO REGIONAL DEPUTY DIRECTOR, HSE

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

1. When the higher secondary courses started in Kerala? What is the net benefit of de linking of pre degree from colleges?
2. What is your opinion about quality accessibility and individual attention of higher secondary education?
3. What is your opinion about faculties their qualification and the working of various teachers association?
4. The demerits noticed by you in implementing the cooperative and collaborative learning at higher secondary level?
5. What is your view on employment sector scarcity?
6. What are the constraints felt by you in the administrative aspects of higher secondary education?
7. What is your opinion on single window admission procedure?
Problems if any you have noticed in this process?
8. What are the treats noticed by you in evaluation procedure?

Appendix IX

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

INTERVIEW SCHEDULE– FOR HIGHER SECONDARY PRINCIPAL

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Facilities

1. Do you think location of the school is adequate and accessible?
2. Are you satisfied with the facilities for higher secondary in your school?

Administration and constraints in Teaching

3. What are the difficulties when taking up both teaching and administrative duties?
4. Do you face difficulties in relation to lack of teachers for all subjects in your school?
Single window Admission duties
5. What is your opinion about single window admission procedure?
6. Problems if any you have noticed in the process?
PTA
7. Do you feel any difficulty in the functioning of PTA in your school?
8. Do you feel any difficulty in conducting –PTA executive meeting
9. Are you satisfied with the working of PTA in your school?
10. Do you have any difficulties in implementing the decisions suggested by PTA?
Cluster meetings
11. Do you have enough time to attend cluster meetings?
Open school students
12. How do you manage open school students ? Whether you face any difficulty in managing open school students?
Fund & office management

13. Do you have any difficulties in preparing and submitting various bills to treasury?
14. Does your institution have any aids from local body institutions/ Government- For the construction and maintenance of building, for improving infrastructural facilities, for the smooth functioning of various programmes etc,
15. Is there any difficulty in making correspondence with various offices? What are the constraints faced by you in accessing circulars or orders from the DHSE?
Management of day today activities
16. Do you feel any difficulty in solving day today problems arising in your school?
17. Do you have enough time in making arrangements for checking the cleanliness of your school?
18. Do you have enough time in supervise various club activities in your school?

Administrative training needs

19. Did you attend any training programmes for the improvement of your administration capacities
20. Do you think whether there is any need for such training?

Administrative training

21. Important suggestions for strengthening of higher secondary education system in Kerala?

Appendix X
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
INTERVIEW SCHEDULE- FOR
VOCATIONAL HIGHER SECONDARY PRINCIPAL

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

Facilities

1. Do you think location of the school is adequate and accessible?
2. Are you satisfied with the facilities for higher secondary in your school?

Administration and constraints in Teaching

3. What are the difficulties when taking up both teaching and administrative duties?
4. Do you face difficulties in relation to lack of teachers for all subjects in your school?

Single window Admission duties

5. What is your opinion about single window admission procedure?
6. Problems if any you have noticed in the process?

PTA

7. Do you feel any difficulty in the functioning of PTA in your school?
8. Are you satisfied with the working of PTA in your school?
9. Do you have any difficulties in implementing the decisions suggested by PTA?

Cluster meetings

10. Do you have enough time to attend cluster meetings?

Fund and office management

11. Do you have any difficulties in preparing and submitting various bills to treasury?

12. Does your institution have any aids from local body institutions/ Government- For the construction and maintenance of building, for improving infrastructural facilities, for the smooth functioning of various programmes etc.
13. Is there any difficulty in making correspondence with various offices? What are the constraints faced by you in accessing circulars or orders from the DVHSE?

Management of day today activities

14. Do you feel any difficulty in solving day today problems arising in your school?
15. Do you have enough time in making arrangements for checking the cleanliness of your school?
16. Do you have enough time in supervise various club activities in your school?

Administrative training needs

17. Did you attend any training programmes for the improvement of your administration capacities
18. Do you think whether there is any need for such training?
19. Important suggestions for strengthening of higher secondary education system in Kerala?

Appendix XI

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

INTERVIEW SCHEDULE TO ASAP COORDINATOR

Dr. Baiju K. Nath
Assistant Professor

Anitha Mangad
Research Scholar

1. Do you consider ASAP as a course having more employment opportunities?
2. What are the skill courses in ASAP?
3. Whether there is any difficulty to get advanced training in opted skill sector through ASAP?
4. How will you manage the fund allotted for conducting ASAP?
5. What are the major constraints in coordinating various activities of ASAP?