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Chapter 6

SUMMARY AND CONCLUSIONS

6.1 STUDY IN RETROSPECT

The present study has been designed to find out the educational and vocational problems and needs of Vocational Higher Secondary School Students in Kerala. The summary of the study is presented in this chapter.

6.1.1 Objectives of the study

1. To study the educational problems of students in the vocational higher secondary schools of Kerala.
2. To study the educational needs of students in the vocational higher secondary schools of Kerala.
3. To study the vocational problems of students in the vocational higher secondary schools of Kerala.
4. To study the vocational needs of students in the vocational higher secondary schools of Kerala.
5. To compare the educational and vocational problems and needs of students in the vocational higher secondary school students with respect to the following subsamples:
   a. Gender
   b. Locale
   c. Management
   d. Subject Group
6. To analyse the vocational problems and needs of vocational higher secondary school students with respect to each vocation included in the vocational higher secondary curriculum.

7. To suggest measures for minimizing the educational and vocational problems of students in the vocational higher secondary schools of Kerala.

6.1.2 Hypotheses of the Study

The hypotheses formulated for the present study are the following:

1. The students in the vocational higher secondary schools of Kerala experience several educational problems.

2. The students in the vocational higher secondary schools of Kerala have several educational needs.

3. The students in the vocational higher secondary schools of Kerala experience several vocational problems.

4. The students in the vocational higher secondary schools of Kerala have several vocational needs.

5. There will be significant difference between the mean scores on educational and vocational problems and needs of students in the vocational higher secondary school of Kerala with respect to the following sub sample:
   a. Gender
   b. Locale
   c. Management
   d. Subject Group
6.1.3 Methodology in Brief

To identify the educational and vocational problems and needs of the students in the vocational higher secondary schools in Kerala, a survey has been conducted among the students, teachers, instructors, Heads of schools and parents representing the fields.

Major tools used for the collection of data are the following:

1. Questionnaire for students
2. Interview with students
3. Interview with Non Vocational Teachers
4. Interview with Vocational Teachers
5. Interview with Instructors
6. Interview with Heads of Schools
7. Interview with Parents

The sample for the survey is comprised of 2080 students, 60 non vocational teachers, 120 vocational teachers, 60 Heads of schools, 80 instructors and 120 parents of 60 vocational higher secondary schools from 9 districts of Kerala.

Educational and vocational problems and needs of students were collected using the prepared questionnaire. Also, personal interviews were carried out in detail to identify the vocational problems peculiar to each vocation. Educational problems and needs were collected from VHS students, non-vocational teachers, vocational teachers, Heads of schools and parents while vocational problems and needs were gathered from VHS students, vocational teachers, vocational instructors and parents with the help of interview schedules.
Appropriate statistical techniques were used to analyse the collected data. The major statistical techniques used are ‘t’ test and ANOVA.

6.2 MAJOR FINDINGS OF THE STUDY

The major findings that have emerged from the present study are the following.

1. 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%).

2. Majority of the parents of the students have education up to SSLC (fathers - 55.2%, mothers - 56.6%). Among them a great majority of the fathers are engaged in non-technical occupation (71.8%) and mothers in household affairs (85.6%).

3. Majority of VHS students under study, to a ‘high extent’ experience certain curricular problems such as lack of vocational practical texts (57.2%) and limited library facilities (61.7%). The t values and F value obtained after comparing the mean scores on curricular problems are significant with respect to gender (t= 7.0), locale (t=5.27), management (t=16.97), and group (F=13.83). It can be inferred that boys studying in urban government schools have significantly more curricular problems than girls in rural aided schools. Compared to other subject groups, subject group 1 students have more curricular problems than the others.

4. A large number of students to a ‘high extent’ experience the co-curricular problems like less importance given to - arts (64.2%), sports (65.9%) and
opportunities for physical and mental entertainments (60.4%). It is evident from the comparison of mean scores on co-curricular problems that the t values and F value are significant at 0.01 level with respect to gender (t=4.84), locale (t=3.76), management (t=6.89) and subject group (F=8.73). It can be inferred that boys studying in urban government schools have significantly more co-curricular problems than their female counterparts in rural aided schools. Also, subject group I students have significantly higher co-curricular problems than students in subject group II followed by subject group IV and subject group III.

5. To a ‘high extent’ a considerable number of students have the administrative problems of tight time schedule from 8.30 am to 4.30 pm (40.5%) as well as lack of classes in the right perspective (43.7%). The t values 5.12, 7.69 and 13.6 obtained by comparing the scores regarding administrative problems are significant at 0.01 level with respect to gender, locale and management. But the F value (F = 1.1) obtained while comparing the mean scores with respect to subject group is not significant even at 0.05 level. It can be inferred that boys studying in urban government schools have more administrative problems than their female, rural, aided counterparts. Also, the administrative problems of students are independent of the subject group in which they are studying.

6. A good proportion of students under study are to a ‘high extent’, facing the infrastructural problems such as shortage of latrines with water facilities (62.6%) as well as old vocational equipments (46.3%). It is evident from the
comparison of the mean scores on infrastructural problems that the t values obtained with respect to the gender (t=5.97), locale(t=6.96), management (t=18.17) are quite significant at 0.01 level. The F value (F=69.13) obtained with respect to subject group is also found to be significant at 0.01 level. It can be inferred that boys studying in urban government school have significantly more infrastructural problems than the female, rural, aided counterparts. Also, subject group I students have significantly higher infrastructural problems than students in subject groups II followed by subject group III and subject group IV.

7. According to non vocational teachers, majority of students face difficulties in getting reference materials for projects, assignments (61.7%) and difficulty in answering application level questions (45%).

8. The vocational teachers reported that major educational problems of the students are lack of vocational theory texts (97.5%) and vocational practical texts (97.5%) and scarcity of learning materials like charts& models (66.7%).

9. A good majority of Heads of schools under study are facing difficulties due to the shortage of funds for-practicing arts & sports (63.3%), purchasing of vocational lab equipments (55%) as well. They are not satisfied with the learning materials provided for vocational education (75%). 58.3% of them reported that they face difficulty due to the delay for the maintenance of vocational lab equipments.
10. A major proportion of parents endorsed that their children do not get weightage (66.7%) and provision for vocational higher studies (61.7%). An appreciable number (41.7%) are not satisfied with the constant change of teachers and the information provided to their children regarding the vocation.

11. To a ‘high extent’, majority of students under study experience certain curricular needs such as reduction of non vocational theory (76.3%), necessity of vocational seminars (65.9%) and the opportunities for vocational higher studies (62%). Comparison of the mean scores regarding the curricular needs reveals that the t values and F value obtained are significant with respect to gender (t= 7.83), locale (t=4.93), management (t= 12.08) and subject group (F=13.98). It can be inferred that boys studying in urban government schools have more curricular needs than their female counterparts in rural aided schools. Besides, subject group I students have significantly more curricular needs than the students in subject groups III followed by subject group IV and subject group II.

12. To a ‘high extent’, majority of students demanded the co-curricular needs like giving importance to arts (65.4%), sports (67.1%) and effective functioning of N.S.S. (56.1%) and N.C.C. (63.8%) in schools. Comparison of the mean scores regarding the infrastructural needs reveals that the t values and F value obtained are significant with respect to gender (t =5.1), locale ( t=4.00), management (t=7.76) and subject group (F=10.47). It can be inferred that boys studying in urban government schools have more infrastructural needs than
their female counterparts in rural aided schools. Besides, subject group I students have significantly more infrastructural needs than the students in subject groups III followed by subject group II and subject group IV.

13. Majority of students under study to a ‘high extent’, expressed the administrative needs such as fixed period for library (65.5%), arts & sports (56.1%). Comparison of the mean scores regarding the administrative needs reveals that the t values and F value obtained are significant with respect to gender (t = 4.84), locale (t = 5.19), management (t = 9.96) and subject group (F = 5.61). It can be inferred that boys studying in urban government schools have more administrative needs than their female counterparts in rural aided schools. Besides, subject group I students have significantly more administrative needs than the students in subject groups IV followed by subject group II and subject group III.

14. Majority of students to a ‘high extent’ experience the infrastructural needs like new vocational equipments (66.4%), charts, models (72.8%), library texts (65.3%) and reading rooms (78.2%). Comparison of the mean scores regarding the infrastructural needs reveal that the t values and F value obtained are significant with respect to gender (t = 4.58), locale (t = 5.23), management (t = 11.1) and subject group (F = 35.28) at 0.01 level. It can be inferred that boys studying in urban government schools have significantly more infrastructural needs than girls in rural aided schools. Also subject group I students have significantly more infrastructural needs than subject groups II followed by subject group III and subject group IV.
15. Majority of non-vocational teachers endorsed the educational needs such as more periods for non-vocational subjects (56.7%), library periods (70%), and effective functioning of library (60%).

16. A high percentage of vocational teachers expressed the need for vocational practical texts (97.5%), vocational question paper with answer keys (88.3%) and multimedia learning materials for vocational study (78.3%).

17. Majority of the Heads of schools under study are in need of financial aid - to buy library texts (73.3%) and laboratory apparatus (60%). They also needed the prompt maintenance of vocational equipments (71.7%).

18. A good number of parents are of the opinion that their children are in need of learning materials (56.7%). A considerable number of parents also reported the need for class PTA meetings (32.5%) as well as permanent staff in schools (31.7%).

19. A considerable number of VHS students under study to a ‘high extent’, confront the problem of inappropriate vocational practicals offered in course (59.1%) and limited provision in the handling of vocational equipments (41.2%). Comparing the mean scores on vocational problems shows that the t values and F value obtained are significant at 0.01 level with respect to gender (t=9.06), locale (t=5.56), management (t=11.97) and subject group (F=9.32). It can be inferred that boys studying in urban government schools have significantly more problems than the girls in rural, aided schools. Also subject group I students have significantly more vocational practical problems than their counterparts in other subject groups.
20. Majority of students under study to a ‘high extent’ feel the problem due to incompletion of on-the-job-training within 10 days (61.3%). 49% of them to an ‘average extent’ experience the problem due to the lack of awareness about vocation through field visits. Comparing the mean scores on vocational problems the t values obtained are significant with respect to gender (t=6.24), locale (t=6.22), management (t=6.89) and subject group (F=6.97). It can be inferred that boys studying in urban government schools have significantly more problems than their female counterparts in rural aided schools. Compared to other subject groups, subject group IV students have significantly more field and training problems.

21. A good number of vocational teachers admitted that the students feel the difficulty to do vocational practicals according to the syllabus (51.7%), lack of awareness about vocational practicals in new methods (51.7%) and unrelated vocational theory and practicals (54.2%). The teachers of both urban and rural, government and aided, male and female are of the same view.

22. Considering the field and training problems, a good majority of vocational teachers reported the difficulty in getting places for on-the-job-training (80%) and field visits (71.7%). Also lack of sufficient explanation during field visit (77.5%) and lack of help during on-the-job-training (62.5%) are other problems.

23. As per the opinion of majority of vocational instructors, students feel the problem due to the lack of skill development essential for the course (66.3%)
and technical delay in repairing vocational equipments (67.5%). The instructors of both urban and rural, government and aided male and female are of the same view.

24. Majority of parents are not satisfied with the information their children get from outside field (64.2%), the vocational training they get (61.7%) and facilities inside the vocational laboratory (55%).

25. To a ‘high extent’ majority of the VHS students under study are in need of execution of more number of vocational practicals (63.3%) and need to change vocational practicals in accordance with vocational theory(44.8%). Comparing the mean scores on vocational needs shows that the t values obtained are significant with respect to gender (t=9.67), locale (t=6.24), management (t=10.66) and subject group (F=13.36). It can be inferred that boys studying in urban government schools have significantly more vocational needs than girls in rural, aided schools. Also subject group I students have significantly more vocational practical needs than their counterparts in other subject groups.

26. Majority of students under study feel the field and training needs such as increase the number of field visits (53.4%), one month on the job training (61.4%) and availability of technical experts in vocational training (66.5%). Comparing the mean scores regarding vocational field and training needs shows that the t values obtained are significant with respect to gender (t=5.67), locale (t=9.81), management (t=8.3) and subject group (F=6.8). It can be inferred that boys studying in urban government schools have
significantly more field and training needs than their female counterparts in rural aided schools. Also students in subject group I have significantly more field and training needs than students in subject groups IV followed by subject group II and subject group III.

27. Majority of vocational teachers of all category reported that there is urgent need to do minimum number of vocational practicals in schools (63.3%) and provision to do experiments inside the vocational lab (55.8%). They also demanded demonstration classes from fields (67.5%), the names of institutions selected for on-the-job-training (82.5%), field visits (80%), apprentice training just after the completion of the course (65.8%) and correct guide line about the trading of products from production-cum-training centre(57.5%).

28. Majority of instructors emphasized for including latest methods in vocational practicals (82.5%), effective demonstration of vocational practicals through field visits (75%), one month on-the-job-training (61.3%) and clear cut idea about PTC activities (82.5%).

29. Majority of parents reported the following needs such as importance to vocational training (65%), equipping their children for self-employment (60.8%) and for giving importance to vocational practicals (58.3%).

30. Problems and needs regarding each vocation:-

**Students**

The most important problems are the difficulty in trouble shooting of automobiles, marine engines and domestic appliances like radio and television due to
lack of similar models to experiment with. They also confront the difficulty to do vocational practicals in courses like Textile Dyeing and Printing, Milk products, Dental Technology, ECG and Audiometric Technician, Fish processing Technology as they lack equipments. More often pest identification is difficult for the course in Plant Protection due to lack of specimens. Lack of study materials for courses like Travel and Tourism, Refrigeration and Air conditioning, Rubber Technology, Fruits and Vegetables, Plant protection and skilled coaches for Physical Education training are a severe problems. There is also a problem for availing living animals for vocational practicals in Diary Husbandry and Poultry Husbandry courses.

The major needs located lie in the emphasis on maintenance and operation of biomedical equipments and adequate training in seedling and reaping with the help of machineries. Clinical experience is needed for MLT, Dental Technology and Domestic Nursing courses. They are also in need of vocational practical connected with auditing, banking, restaurant management, office management and insurance. Study materials are needed for Physiotherapy, Crèche & Preschool Management as well as raw material for Clothing & Embroidery. Assistance of technicians from marine engine workshops is also needed. Close linkage with hatcheries and fish processing units are also demanded for.

**Vocational teachers**

Most important problems are vast syllabus prescribed for Computer Science. Scarcity of apparatus is felt in Fishing Craft and Gear Technology, ECG, Physiotherapy, Cosmetology & Beauty parlour Management courses. There is difficulty to get cyber firms for Computer Application courses, construction
companies for Civil Construction & Maintenance and research station for agricultural courses for carrying out field visits. There is also difficulty to get places for OJT in the cases of courses like Rubber technology, Textile Dyeing, Sericulture, Banking Assistance, Accountancy & Auditing. Lack of model engines in Maintenance and Repairs of Automobiles and Two & three wheelers are also reported. There is a problem in raising fund for managing hatcheries.

Aware students about latest trends in Agromachinery, Maintenance and Repairs of Automobiles Refrigeration & Air-conditioning, ECG and MLT. Revise vocational courses in Sericulture and Fruits and Vegetables. Vocational training in advanced methods is required for the course in Dairy Husbandry. Practical in connection with office management is to be offered for course in Office Secretaryship.

Non-vocational Teachers

Difficulty is felt due to the low academic performance of students. Syllabus revision by avoiding outdated portions and including relevant portions for subjects like Accountancy, Business studies and Management must necessarily be made. Avoid the overlapping between portions in Management & Business Studies. Instead of Management subject either Economics or Statistics may be included.

Vocational Instructors

Important problems are obsolete equipments offered for courses like Maintenance & Repairs of Automobiles, Fishing craft & Gear Technology and Maintenance and operation of marine engines. Availing raw materials and instruments necessary for Textile Weaving, Textile Dyeing and printing courses are
found to be major hurdles. Scarcity of equipments for physical education course as well as Creche and Preschool Management are also felt. There is difficulty to get clinical sample for students in Domestic Nursing and Medical Laboratory Technician courses.

Training in actual farm situation is essential for courses in Agromachinery, Nursery Management and Ornamental Gardening. For Printing Technology, Rubber Technology, Textile Weaving and Textile Dyeing & Printing, proper training at the places itself is more desirable. Stress should be given for the maintenance & operation of biomedical equipments rather than mere soldering. Importance should be given for the skill development necessary for office management, insurance, reception, book keeping & communication. Hospital training is necessary for physiotherapy course. OJT Training in Tourism department is necessary for Travel & Tourism course.

31. Suggestions for improving vocational higher secondary education

Students suggested that infrastructural facilitation like building, furniture and equipments necessary for vocational practicals must be improved. They also expressed need for vocational training from agricultural farms, workshops, hospitals, travel agencies and banks and insurance sectors concerned with their vocational course.

Non-vocational teachers suggested that the mismatch between secondary and higher secondary portions prescribed for non vocational subjects must be reduced.
Some portions offering preliminary in awareness on the subjects may be introduced in secondary level itself.

Vocational teachers suggested that vocational training, seeking help from professionals in the concerned subjects should be promoted rather than being trained inside the parameters of school. There is a felt need for developing new and emerging skills in accordance with the technical changes demanded by each workplace. Adequate supply of instructional materials as well as provision for Vocational training must be ensured by the authority. Linkages should always be established with trade and industry and their support services in designing curriculum. Apart from the academic performance a test to check their aptitude in the selected vocation is to be conducted.

Instructors suggested that a close link should be maintained between the course and the concerned industry or agricultural farms in terms of the requirements. The skill development and training facilities given for each vocation shall be improved.

Heads suggested that administrative set up must be strengthened for the prompt dispersal of funds. The vocational education must be arranged in such a way that it satisfies the local needs of society.

Parents suggested that there is a need for job assurance and reservation for higher studies for the quality improvement of vocational courses. Important information on career choices and job specification must be imparted.
6.3 TENABILITY OF THE HYPOTHESES

Hypothesis I

*The students in the vocational higher secondary schools of Kerala experience several educational problems.*

The major findings 3,4,5,6,7,8,9,10 showed that to a ‘high extent’ students of vocational higher secondary schools experience several educational problems in curricular, co-curricular, infrastructural and administrative levels. Hence the first hypothesis is substantiated.

Hypothesis II

*The students in the vocational higher secondary schools of Kerala have several educational needs.*

The major findings 11,12,13,14,15,16,17,18 showed that the vocational higher secondary school students experience several educational needs in curricular, co-curricular, infrastructural and administrative levels. Hence the second hypothesis is substantiated.

Hypothesis III

*The students in the vocational higher secondary schools of Kerala experience several vocational problems.*

The major findings 19,20,21,22,23,24 showed that the vocational higher secondary school students experience several vocational problems in vocational
practicals and also in connection with their field visits and vocational training. Hence the third hypothesis is substantiated.

**Hypothesis IV**

_The students in the vocational higher secondary schools of Kerala have several vocational needs._

The major findings 25, 26, 27, 28, 29 showed that the vocational higher secondary school students experience several vocational needs in vocational practicals and also in connection with their field visits and vocational training. Hence the fourth hypothesis is substantiated.

**Hypothesis V**

_There will be significant difference between the mean scores on educational and vocational problems and needs of students in the vocational higher secondary schools of Kerala with respect to the following Sub samples:_

- **a** Gender
- **b** Locale
- **c** Management
- **d** Subject Group

The major findings 3, 4, 6, 11, 12, 13, 14, 19, 20, 25, 26 showed that there is significant difference between the mean scores regarding educational and vocational problems and needs of students in vocational higher secondary schools of Kerala with respect to gender, locale, management and subject group. But the 5th finding
showed that one of the educational needs viz. administrative needs does not vary with the subject group. Hence the hypothesis is partially substantiated.

6.4 CONCLUSIONS OF THE STUDY

1. Socio demographic background of VHS students

   Majority of VHS students are studying in government schools in the rural locality who show only an average academic performance. Also their parents have education up to SSLC as well as fathers are engaged in non-technical occupation and mothers in household affairs.

2. Educational Problems of Students

   The educational problems felt by majority of students to a ‘high extent’ are the lack of vocational theory & practical texts as well as proper library facilities, tight time schedule, shortage of water and latrine facilities.

   According to non vocational teachers, students feel difficulty due to lack of reference material for curricular assignments. The vocational teachers agree that the students have problems due to non-availability of vocational theory & practical texts, along with other learning materials and shortage of facilities for vocational practicals. The Heads of schools are of the view that the students face the problem due to technical hindrances in the maintenance of vocational equipments. In the opinion of parents, their children have the problem due to lack of equipments for vocational practical and lack of weightage for higher studies.
3. Educational needs of students

The educational needs, stressed to a ‘high extent’ by a majority of students are the reduction of non vocational theory and effective learning of General Foundation Course, period for arts, sports & library work and effective functioning of N.C.C. & N.S.S. projects in schools. They also demanded for facilities like new vocational equipments, charts, models, library texts and reading room.

The non vocational teachers agree upon the view that the students need the effective functioning of library. The vocational teachers are of the opinion that the students are in need of multimedia learning materials and model question papers for effective vocational study. The Heads are of the opinion that the students are in need of funds for practicing arts, sports, purchasing and maintenance of vocational equipments. According to parents, their children are in need of infrastructural facilities and information regarding prospects in each vocation.

4. Vocational problems of students

The vocational problems located by majority of VHS students to a ‘high extent’ are the lack of sufficient vocational practicals relevant to the course and insufficient vocational training.

The vocational teachers have the opinion that students feel difficulty due to lack of awareness about new methods in vocational practicals, proper guideline about production-cum-training-centre, difficulty to get permission to visit the place for on-the-job-training & field visit. The vocational instructors are of the opinion that the students have problem due to lack of importance to skill development.
essential for the course, shortage of time for on-the-job-training. According to the opinion of parents students are not trained for jobs.

5. Vocational needs of students

The vocational needs felt by VHS students to a ‘high extent’ are need for execution of more number of vocational practicals, field visits with sufficient explanations and support of technical experts during on-the-job-training. They are also in need of sufficient knowledge about latest trends in their vocational subject. According to the vocational teachers the students are in need of more number of vocational practicals, purposeful field visit and vocational training. The instructors demanded vocational training in advanced methods. Parents also demanded that their children should be equipped with necessary vocational skills for each vocation by imparting proper training.

6. Problems and Needs regarding each Vocation

Students feel difficulty due to the lack of awareness about recent technological advancements in Engineering and Technology courses. They also feel difficulty due to the lack of marine engines for doing practical related to Fisheries courses. In courses on, Animal Husbandry students very often feel difficulty due to the scarcity of living animals for practical. Fenced fields and necessary implements are equally needed for agricultural courses. Students are in need of clinical experience in the case of Para medical courses. For Business and Commerce subjects, vocational practicals must be conducted in order to develop specific skills required for the concerned vocation.
Most important problems identified by vocational teachers are scarcity of apparatus for doing vocational practicals in Fisheries courses, Physiotherapy and Home science courses listed in Appendix – I. Latest trends must be included in the courses coming under the head of Engineering & Technology. It is also concluded that the provision for gaining first hand information requisited for courses coming under the head of Business studies & Commerce is to be ensured.

Instructors reported due to outdated equipments offered for Fisheries, Engineering & Technology courses especially in Textile weaving and Textile Printing & Dyeing courses. Supply of raw materials for each vocational course is an urgent need to be satisfied.

7. Problems and Needs regarding each Non-Vocational subjects

Students experience difficulty due to the lack of fundamental knowledge regarding each non vocational subject. Basic information essential for comprehending higher secondary portions may be included in secondary level itself.

According to non – vocational teachers, when compared to Higher Secondary, only a limited time is allotted to teach non-vocational subjects in VHS with maximum number of students hailing from poor academic background. Hence it is very hard to cover syllabus with the stipulated time. Syllabus revision is necessary for Management subject. Addition of latest trends in Accountancy is indispensably felt.
8. Suggestions of Students, Non-vocational Teachers, Vocational Teachers, Vocational Instructors, Heads of schools and Parents for the improvement of VHS course

The students suggested that proper development, maintenance and utilization of infrastructural facilities are required for the smooth functioning of VHS schools. Lessening the burden of theory is strongly advocated by each non vocational teacher. Heads of institutions are in demand of effective administrative machinery at the state level and proper monitoring of the activities of schools under the same supervision. Implementation of latest trends according to the needs of society, reservation for higher studies and proper training for skill development are the major suggestions given by vocational teachers and instructors. Publicity of VHS courses and assurance of jobs to the students who undergo VHS courses is a welcome suggestion put forwarded by parents.

6.5 IMPLICATIONS OF THE STUDY

The present study has a number of educational and vocational implications which will provide the basis for the improvement of vocational education in VHS schools of Kerala and in restructuring the vocational education.

Implications on Non-Vocational Teachers

The present study enables each teacher to understand the problems and needs of students in connection with non-vocational theory and practical. The teachers would also be prompted to impart individual attention to VHS students because their academic performance is so poor as revealed by the present study. The findings of
the study would undoubtedly equip teachers with a reservoir of capabilities to comprehend the numerous curricular problems, eventually leading to their remedies. Through this study the teachers can also have a wide exposure to some co-curricular problems as well. Administrative and infrastructural problems too are taken note of by teachers as a result of such study.

**Implications on Heads of schools**

The present study will help the Heads of schools to get in touch with the various administrative problems concerning the students. They can also measure the extent to which the problems have rooted inside their arena of work. Since they hail from families of low academic status, they can organize multitude of programmes including remedial teaching for bettering academic achievements. This study would seriously concern the Heads of schools to think of every possibility to better libraries and other learning provisions. It would also inform them of the necessity to arrange co-curricular and group activities like NCC and NSS in schools.

**Implications on PTA of schools**

The study has implications on the PTA of VHS schools. Such bodies can give financial assistance to VHS students in their vocational training and inspire the school authorities to organize several programs for the VHS students by utilizing the community resources.

**Implications on Vocational Teachers**

The study primarily implies the extent of problem with which teachers are to be conscious of in connection with vocational practicals. It would also inform
teachers of the failures they are bound to face with while carrying out training programmes for students. It will eventually help teachers to understand and satisfy the vocational practical needs necessary for students. Such information would also enable teachers to arrange effective vocational training and hold programmes for students to pave their way clear for a bright future. By introducing vocational counselling in schools, students' knowledge on career choices, job specifications, qualifications and training needed for successful employment can be enhanced to a great extent.

**Implications on Instructors**

The study under concern envisages to make instructors in touch with the problems encountered by students during the practicals conducted in lab. Similar problems are also detected by instructors during the course of field visits and OJT. A thorough knowledge on the practical hardships faced by students during the practicals, would alert each instructor to go for required solutions.

**Implications on State Government**

The undertaken study has wide relevance to the government of Kerala since it provides a clear hand information about the educational and vocational problems addressed by VHS students. In fact the study is an eye opener for the government to advance more steps for the betterment of infrastructural and instructional conditions prevailing in VHS schools. The authorities may venture out to avail the service of B.Tech or vocational graduates to train VHS students as a part of their study which in turn will help improving the vocational training of VHS students. This study
convinces the authorities about the poor socio-demographic background of students so as to direct the state government to initiate steps to absorb the VHS pass outs in jobs.

**Implications on VHS Directorate of the State Government**

The government of Kerala may conduct different programs for the progress of VHS students through Directorate of Vocational Higher Secondary Education. The study convinces the authorities that linkages should always be established with trade and industry and their support services in designing curriculum together with ‘on-the-job-training’ facilities. Moral education and value education should also be included in the curriculum. Experts from other vocational institutions may be included in addition to VHS personnel while planning the objectives of vocational study. Steps can be taken by the authorities for the interaction of students with the society. Proper training institution and supply of learning materials would help to improve the quality of vocational teachers and vocational instructors, thereby improving the quality of vocational education.

**Implications on Central Government**

The government of India provides huge amount per year for smooth running of VHS schools and insist on the state government for utilizing these financial resources in a fruitful and intelligent manner. The present investigation informs the government to identify the status of VHS courses offered in Kerala. The study reveals that the majority of students are studying in rural, government schools and they are capable of exhibiting only an average performance. Also they come from poor families. Their fathers are engaged in non-technical occupation and mothers in
household affairs. Provision for better job assurance and self employment to VHS pass outs will help to improve the economic background of students and thus the economy of society as well as country can be changed to a great extent.

6.6 SUGGESTIONS OF THE STUDY

The following suggestions are made on the basis of the major findings and conclusions of the study:

1. Steps are to be adopted by the authority for making society aware of the importance of vocational higher secondary courses and conduct awareness programmes for the purpose.

2. Provide proper linkage for students with the respective vocational institutions outside. On account of that they will be more informed of the latest developments occurring in their field of study.

3. Infrastructure facilities for the use of vocational laboratory, library, reading room and latrine with water facilities should be improved in each vocational higher secondary school.

4. Enrich the quality of vocational teachers and instructors by exposing them to the technical and applied scientific knowledge in the branch of vocational studies with the help of resource persons from vocational institutions outside. The permanency of vocational teachers and instructors must be ensured as well.

5. SCERT must take the initiative for the preparation and supply of adequate texts for vocational theory and practical and enough learning materials. Make
sure that schools are equipped with necessary vocational equipments for vocational practicals.

6. Vocational Higher Secondary Directorate should take responsibility of getting permission for field visits, on-the-job-training and also providing guideline for the activities to be done in production-cum-training-centre. Apprenticeship must be ensured in each vocation.

7. Curriculum planning must be done in such a way that it give proper emphasis on the inclusion of latest methods in vocational practicals. Also provide due importance to co-curricular activities and on-the-job-training by allotting enough time for both. Check the status of course objectives specified in the syllabus.

8. In the light of the findings of the study there is urgent need to give emphasis for developing and practising skills necessary for each vocation through vocational practicals and training. Evaluation of the vocational course should be done on the basis of skill development.

9. The students in vocational higher secondary schools who cannot afford the burden of combined learning of vocational and non-vocational subjects must be given an option to study only the vocational subjects.

10. The students who wish to go for advanced studies in technical courses (Maintenance and Operation of Marine engines, Biomedical Equipments, Fishing Craft and Gear Technology and ECG and Audiometric Technician) must be given an opportunity to study mathematics as an optional subject.
11. The use of audiovisual devices and services such as television, computer, Internet, LCD projectors, and printed matter like, magazines, journals, pamphlets and publications must be used effectively to develop mastery of knowledge in vocational education. Distant learning facilities provided by educational satellites like EDUSAT can also be useful in this respect.

12. Arrange provision for doing sophisticated vocational practical that are not present in every school by establishing vocational education centers in every region. There should be a provision to exchange the ideas of teachers and instructors in their concerned vocation in order to overcome the difficulties faced by them.

13. Heads of institutions and other authorities concerned are required to take initiative in the purchase and maintenance of vocational equipments. Schools must try to nullify the poor academic background of students as far as possible.

14. Concerned authorities should strictly monitor the functioning of career guidance, counselling centre, NCC and NSS projects in schools and enhance the quality of vocational education in schools.

15. The Government and all other concerned authorities should take the problems of VHS students as a challenge and formulate necessary solution in this regard. The government at the state and central level must allocate more funds for vocational education in building up facilities and resources for infrastructural and instructional purpose. Effective supervision should be
made on the dispersal of fund. The quality of the vocational equipments also must be ensured while purchasing.

16. Sufficient co-ordination and co-operation between the departments under the Directorate of industries, labour and education is necessary for the proper functioning of vocational schools.

17. The Government should take initiative in getting recognition of Public Service Commission for all the vocational courses in VHS schools of Kerala.

18. Authorities should take effective measures for popularizing vocational education by giving adequate weightage for higher courses related to their vocation and assuring employment to those who want to get employed after the completion of the course.

19. Innovative teachers who are able to develop and practice better skills using easily available local resources must be properly rewarded. There must be a change in the attitude of the vocational higher secondary school teachers to accept, develop and practice strategies adopted for vocational skill development, and it must be made a leading principle in the training of teachers.

20. More research and development should be conducted in the field of vocational education. Research establishments in the field of vocational education must give thrust to the vocational training and skill development.
6.7 SUGGESTIONS FOR FURTHER RESEARCH

1. An assessment on the effectiveness of the vocational training offered by each vocational course can be conducted.

2. A comparative study of the educational problems and needs among the students of engineering technology, agriculture, paramedical and fisheries courses can be carried out.

3. An enquiry can be done to evaluate the facilities provided in the vocational training centers, fields and also in connection with production-cum-training centre.

4. Studies for understanding factors affecting choice of vocational courses and adjustment of students in vocational streams can be conducted.

5. A study can be conducted to know the range and trend of available occupations, levels of competency required and the extent to which educational and training facilities available for the students.

6. A comparative study between employment potential and opportunities available to VHS students will be helpful.

7. Comparative study among VHS, ITI and polytechnic courses regarding vocational training can be conducted.

8. A study can be done on effectiveness of guidance and counselling courses in schools and status of VHS pass outs is useful.

9. Identification of curriculum efficiency of VHSE course with reference to locality can be done.
10. A study on problems and prospects of vocational education can be made with the help of questionnaire, interview schedule, check list and attitude scale.

11. A comparative study of the effectiveness of Computer-assisted Instruction and Co-operative Learning in different non vocational as well as vocational subjects can be conducted.

12. Self learning packages required for different vocational courses may be prepared and subjected for assessment.

13. A comparative study can be conducted about the implementation of vocational education in the different states of the country.