

Implementation of Electronics sector under CSS-VSE in West Bengal: An Analytical Study.

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ABSTRACT

Electronics sector, among 13 numerous sectors under CSS-VSE in West Bengal, has made some significant demand as this sector produces a diversity of devices and equipments. It plays an important role for the growth and development of Indian economy. The present paper is the outcome of the study of “Implementation of Electronics Sector under CSS-VSE in West Bengal”. For study all the 676 approved functional secondary schools in West Bengal where Vocational courses are running under CSS-VSE (NSQF), are taken. Data are collected from West Bengal Board of Secondary Education (WBBSE), West Bengal Council of Higher Secondary Education (WBCHSE), West Bengal State Council of Technical, Vocational Education and Skill Development (WBSCTVESD) and National Skill Qualification Framework (NSQF) Cell of Directorate of Vocational Education and Training (DVET), Govt. of West Bengal. Data are also collected with the help of various tools like questionnaire, interview schedules for survey. Results of the study highlight that there is a need to strengthen Electronics sector under CSS-VSE(NSQF) in West Bengal. The study also reveals the growth and performance of Electronics as well as the scope and problem areas of Electronics sector under CSS-VSE in West Bengal.

Keywords: *Implementation , Electronics, Vocational Education , CSS-VSE , NSQF, West Bengal.*

INTRODUCTION

*In the age of advanced technology, there is a trend of smart offices and smart homes where Electronics is an essential part of daily life. Both the Central and State Governments of India have tried to provide adequate support and focus towards this Sector. Implementation of Electronics under CSS-VSE is a good example of such support and focus towards that Sector. Electronics devices are used for **entertainment** e.g flat screen TVs, DVD players, Video games, remote control etc, **Communication** e.g telephones, cell phones, e- mail, laptops etc, **Home-Office Activities** e.g desktops, computers, printers paper shredders etc. It has been observed that the Electronics Sector not only contributes significantly to export earnings and GDP but also emerges as major source of employment generation in the country.*

Vocational courses are typically more practical and skills – based than mere general academic degrees. As there is an ample scope of vertical and horizontal mobility of vocational education system, the students of different vocational sectors particularly Electronics sector have opted to

be admitted to colleges and universities for general academic degrees as well as vocational degrees. Thus the students can get dual opportunities. In one word, Vocational Education and Training is an important element of the nation's education initiative. The success of Vocational Education would depend on the coordinated function of different levels of people in the society. There are 14199 Secondary Schools in West Bengal but there are only 676 approved functional secondary schools (VTCs) in West Bengal. Out of 676 approved functional Secondary Schools, 112 School Authorities have opted to introduce Electronics Sector (Level-1 at class- IX) in their schools in the Academic Year- 2018 considering its importance. Each school has been approved to conduct 2 sectors out of 13 vocational sectors under CSS-VSE. These are IT & ITes, Electronics, Retail, Tourism and Hospitality, Apparel, Plumbing, Beauty and Wellness, Security, Agriculture, Automotive, Construction, Healthcare and Power. The vocational courses have been introduced according to the need of area. The present investigator formulated the study on **“Implementation of Electronics sector under CSS-VSE in West Bengal: An Analytical Study”** with special reference to Vocational Education in West Bengal under Centrally Sponsored Scheme for Vocationalisation of School Education (CSS-VSE).

OBJECTIVES OF THE STUDY

Electronics sector under Vocational Education is very important from the point of view of the economic development of the developing country like ours. It will help to solve the problem of unemployment and prepare the way for self-employment. Considering these important aspects of Electronics sector in Vocational Education, the following objectives are included in the focus of present study related to **“Implementation of Electronics sector under CSS-VSE in West Bengal : An Analytical Study”**.

- To study the present status of Electronics sector in Vocational Education of West Bengal under CSS-VSE (NSQF).
- To study the effectiveness of Electronics sector in Vocational Education of West Bengal under CSS-VSE (NSQF).
- To find out the opportunities and challenges in the way of effective implementation of Electronics sector in Vocational Education of West Bengal under CSS-VSE (NSQF).
- To invite the suggestions for quality enhancement of Electronics sector in Vocational Education of West Bengal.
- To study the attitude of the students towards Electronics sector in Vocational Education of West Bengal under CSS-VSE (NSQF).
- To study the reaction of the Head of Institution (HOI) and Guardians of the approved Vocational schools in West Bengal where Electronics sector has been running under CSS-VSE (NSQF).

METHOD OF STUDY

The study was carried out as a 'descriptive research' which is concerned with studying what exists. It interprets and explains the existence of educational phenomena. This method is concerned with document analysis, surveying, describing and investigating the existing phenomena, conditions and relationships. In the study some documents are analyzed and interpreted by the researcher to give voice and meaning around the assessment topic. Here researcher has followed the mixed – method studies.

POPULATION

The present study is in the nature of document analysis and survey. It was conducted in 112 approved functional Vocational Secondary Schools where Electronics Sector has been running under CSS-VSE of 23 districts in West Bengal.

TOOLS AND TECHNIQUES USED IN THE STUDY

The standardized questionnaires had been used to collect data from the guardians and the Headmasters/ Headmistresses of approved 112 Vocational secondary schools in West Bengal under CSS-VSE (NSQF) on different aspects of Vocational Education Programme in West Bengal. Interview (both structured and unstructured) for the office personnel from WBBSE, WBCHSE and WBSCTVESD had also been used to collect the data. Moreover, the Primary data had been collected from the documents like conference and seminars proceedings and Secondary data had also been collected from the documents like thesis, dissertations, books, research articles, magazines , research journals, e- journals, report of the NSQF cell, DVET , Govt. of West Bengal. Moreover, document analysis as a social research method is also an important research tool in its own right and an invaluable part of the most schemes of triangulation, the combination of methodologies in the study of the same phenomenon (Bowen, 2009).

DATA COLLECTION

The above mentioned tools were used for the collection of data. All the instruments were personally used by the investigator. To conduct the present study, Primary data collection would be used with the help of questionnaire & interview schedules and secondary data would be collected from publishing materials like newspaper, magazine, brochure, annual report etc. As a documentary research, it was also conducted through the use of official documents or personal documents as the source of information.

ANALYSIS AND INTERPRETATION ON DATA

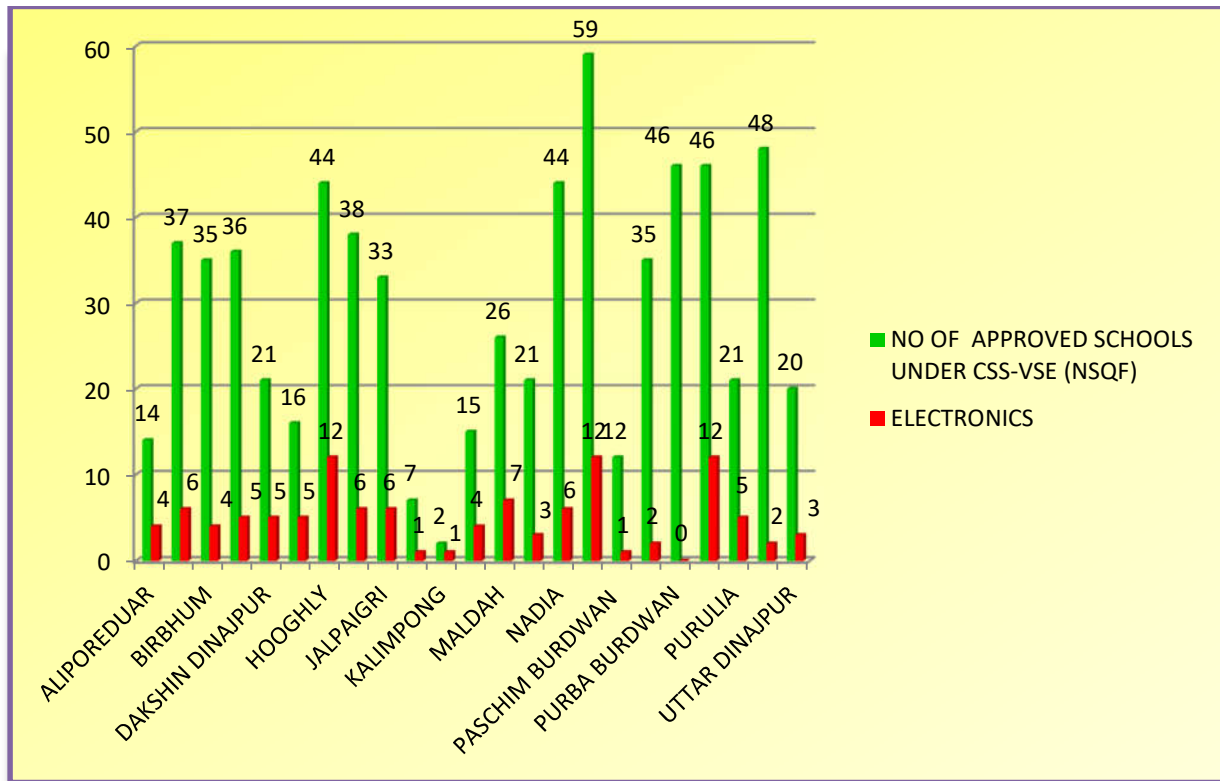
The researcher analyzed the data by different variables using tabulation sheet collected from Google drive and field survey. Graphical representation using Bar diagram and Pie Chart was

given for easy understanding and finding out the effectiveness of implementation of Electronics Sector under CSS-VSE (NSQF) in West Bengal.

**TABLE: 1 DISTRICT WISE ELECTRONICS SECTOR SEGREGATION
IN WEST BENGAL UNDER CSS-VSE (NSQF) -2020-2021**

| SL NO | NAME OF DISTRICT | NO OF APPROVED SCHOOLS UNDER CSS-VSE (NSQF) | ELECTRONICS |
|-------|-------------------|---|-------------|
| 1 | ALIPOREDUAR | 14 | 4 |
| 2 | BANKURA | 37 | 6 |
| 3 | BIRBHUM | 35 | 4 |
| 4 | COOCHBIHAR | 36 | 5 |
| 5 | DAKSHIN DINAJPUR | 21 | 5 |
| 6 | DARJEELING | 16 | 5 |
| 7 | HOOGLY | 44 | 12 |
| 8 | HOWRAH | 38 | 6 |
| 9 | JALPAIGRI | 33 | 6 |
| 10 | JHARGRAM | 7 | 1 |
| 11 | KALIMPONG | 2 | 1 |
| 12 | KOLKATA | 15 | 4 |
| 13 | MALDAH | 26 | 7 |
| 14 | MURSHIDABAD | 21 | 3 |
| 15 | NADIA | 44 | 6 |
| 16 | NORTH 24 PARGANA | 59 | 12 |
| 17 | PASCHIM BURDWAN | 12 | 1 |
| 18 | PASCHIM MEDINIPUR | 35 | 2 |
| 19 | PURBA BURDWAN | 46 | 0 |
| 20 | PURBA MEDINIPUR | 46 | 12 |
| 21 | PURULIA | 21 | 5 |
| 22 | SOUTH 24 PARGANA | 48 | 2 |
| 23 | UTTAR DINAJPUR | 20 | 3 |
| | TOTAL | 676 | 112 |

FIGURE : 1 DISTRICT WISE ELECTRONICS SECTOR SEGREGATION IN WEST BENGAL UNDER CSS-VSE (NSQF) -2020-2021



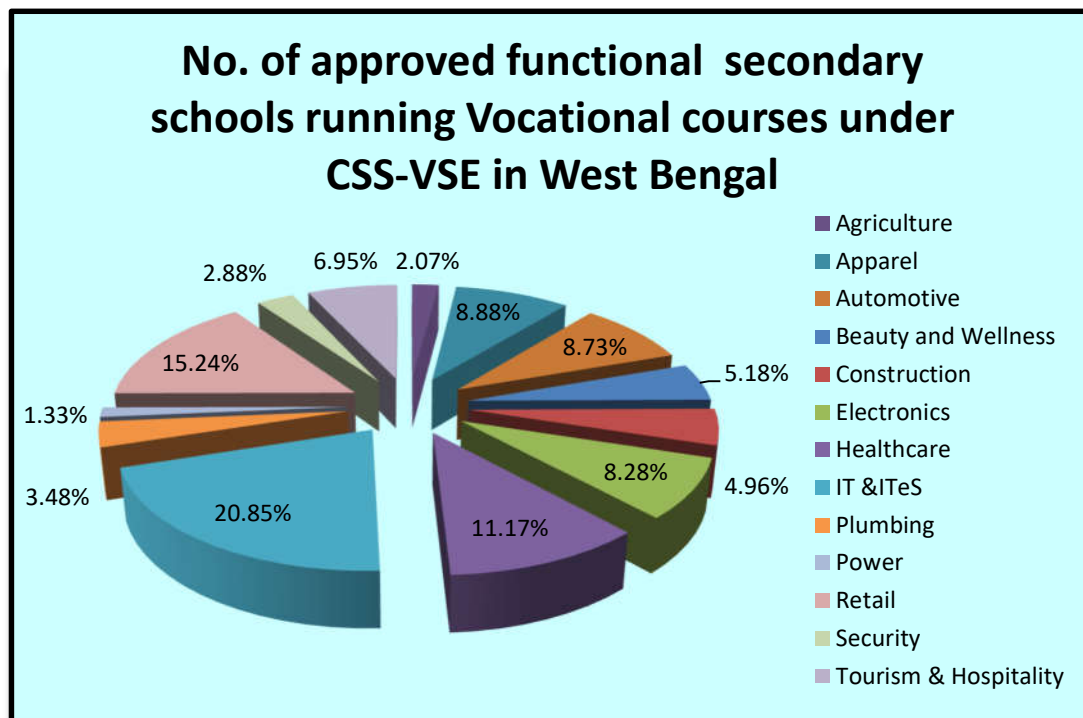
INTERPRETATION AND FINDINGS (TABLE: 1 AND FIGURE: 1)

The table & the figure reflect that there are 676 approved functional secondary schools in West Bengal under CSS-VSE (NSQF) but there are 112 schools where Electronics sector has been running.

TABLE:2 SECTOR WISE SCHOOL SEGREGATION IN WEST BENGAL UNDER CSS-VSE.

| Sector | No. of approved functional secondary schools running Vocational courses | % |
|-----------------------|---|-------------|
| Agriculture | 28 | 2.07% |
| Apparel | 120 | 8.88% |
| Automotive | 118 | 8.73% |
| Beauty and Wellness | 70 | 5.18 % |
| Construction | 67 | 4.96 % |
| Electronics | 112 | 8.28 % |
| Healthcare | 151 | 11.17 % |
| IT &ITeS | 282 | 20.85 % |
| Plumbing | 47 | 3.48 % |
| Power | 18 | 1.33 % |
| Retail | 206 | 15.24 % |
| Security | 39 | 2.88 % |
| Tourism & Hospitality | 94 | 6.95 % |
| Total | 1352 | 100% |

FIGURE: 2 SECTOR WISE SCHOOL SEGREGATION IN WEST BENGAL UNDER CSS-VSE



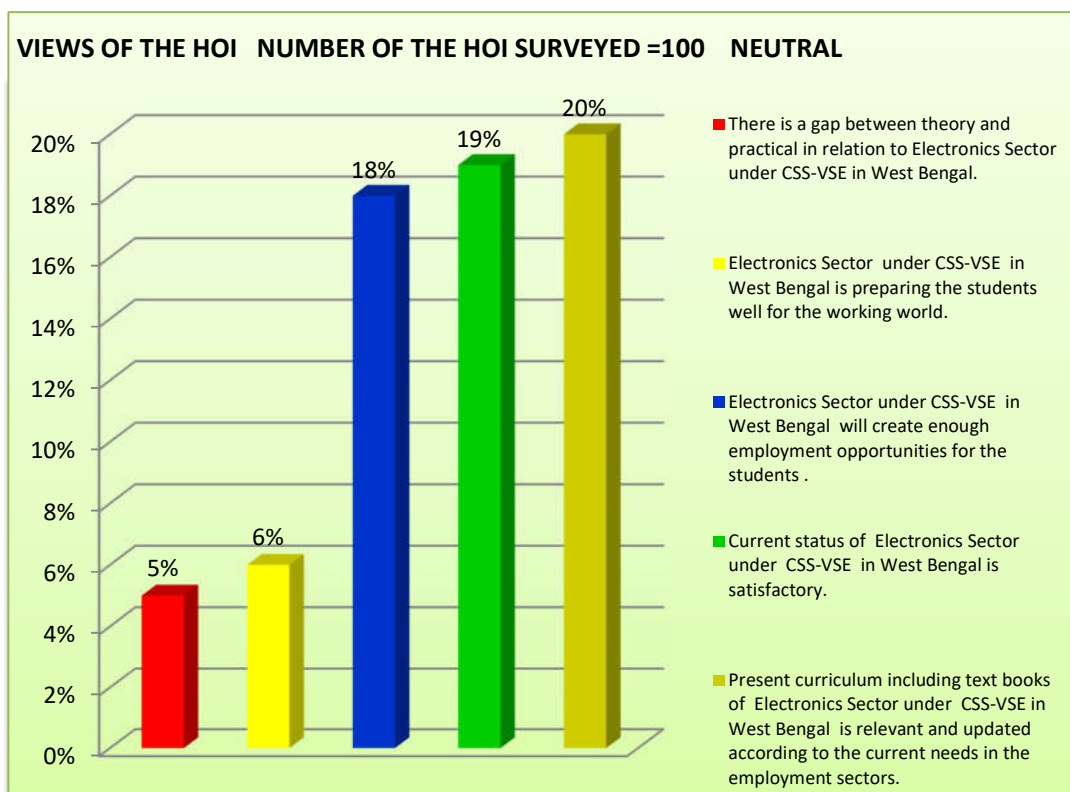
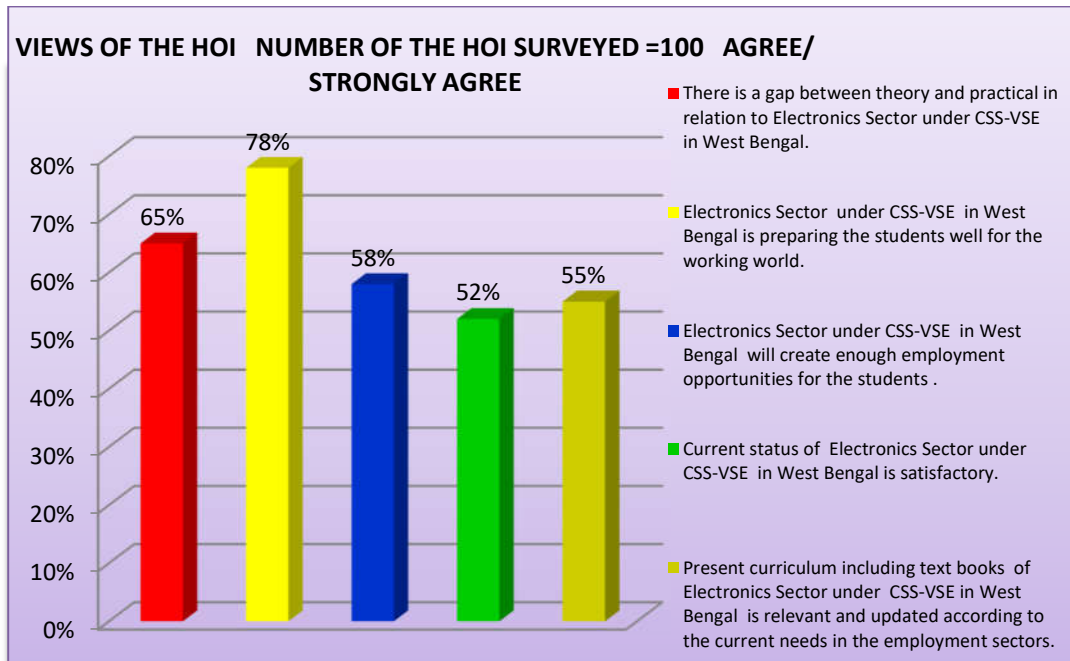
INTERPRETATION AND FINDINGS (TABLE: 2 AND FIGURE: 2)

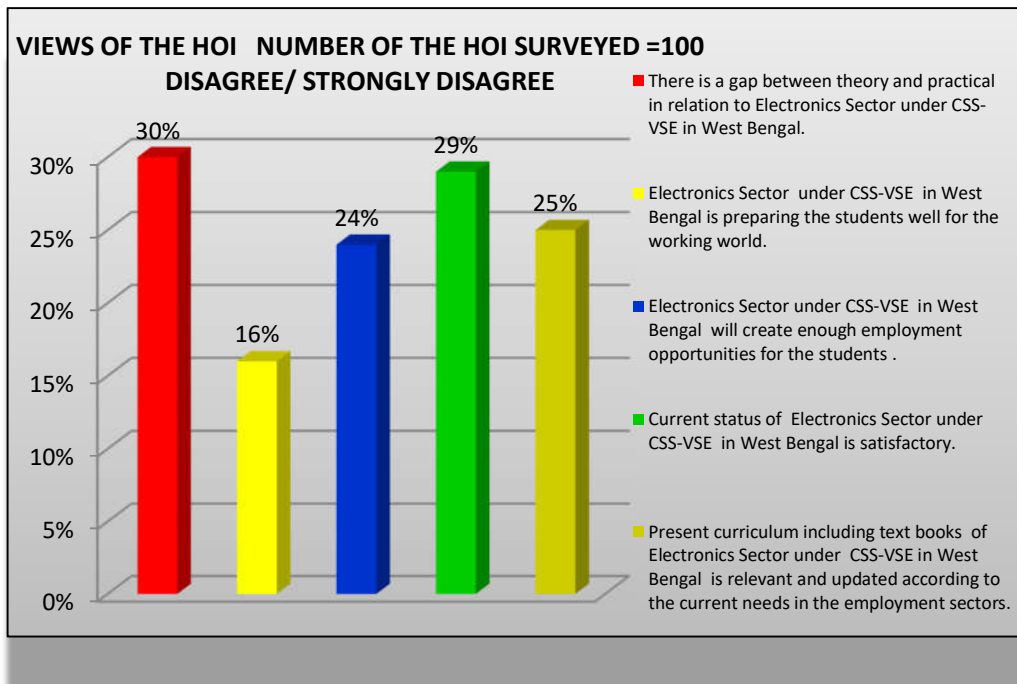
There are 676 approved functional secondary schools with Vocational Streams in West Bengal. 676 secondary schools have been running with 13 Vocational sectors under CSS-VSE. Sector wise school segregation (**Table: 2 and Figure: 2**) shows that 28 schools i.e. 2.07% schools are running with Agriculture sector, 120 schools i.e. 8.88% schools are running with Apparel sector, 118 schools i.e. 8.73% schools are running with Automotive sector, 70 schools i.e. 5.18% schools are running with Beauty and Wellness sector, 67 schools i.e. 4.96% schools are running with Construction sector, **112 schools i.e. 8.28% schools are running with Electronics sector**, 151 schools i.e. 11.17% schools are running with Healthcare sector, 282 schools i.e. 20.85% schools are running with IT & ITeS sector, 47 schools i.e. 3.48% schools are running with Plumbing sector, 18 schools i.e. 1.33% schools are running with Power sector, 205 schools i.e. 15.24% schools are running with Retail sector, 39 schools i.e. 2.88% schools are running with Security sector, 94 schools i.e. 6.95% schools are running with Tourism and Hospitality sector. Moreover the Table: 2 and Figure: 2 reflect that Electronics is the most flourished sector but it was introduced in Class IX (Level-1) in the Academic Year2018 under CSS-VSE in West Bengal.

TABLE :3 VIEWS OF THE HOIs ABOUT THE PROBLEM RELATED TO THEIR SCHOOLS WHERE ELECTRONICS SECTOR IS RUNNING

| SL NO | VIEWS OF THE HOI | NUMBER OF THE HOI SURVEYED =100 | | | | | |
|-------|---|---------------------------------|-----|---------|-----|-----------------------------------|-----|
| | | AGREE/ STRONGLY AGREE | % | NEUTRAL | % | DISAGREE/ STRONGLY DISAGREE | % |
| 1 | <i>There is a gap between theory and practical in relation to Electronics Sector under CSS-VSE in West Bengal.</i> | 65 | 65% | 5 | 5% | 30 | 30% |
| 2 | <i>Electronics Sector under CSS-VSE in West Bengal is preparing the students well for the working world.</i> | 78 | 78% | 6 | 6% | 16 | 16% |
| 3 | <i>Electronics Sector under CSS-VSE in West Bengal will create enough employment opportunities for the students .</i> | 58 | 58% | 18 | 18% | 24 | 24% |
| 4 | <i>Current status of Electronics Sector under CSS-VSE in West Bengal is satisfactory.</i> | 52 | 52% | 19 | 19% | 29 | 29% |
| 5 | <i>Present curriculum including text books of Electronics Sector under CSS-VSE in West Bengal is relevant and updated according to the current needs in the employment sectors.</i> | 55 | 55% | 20 | 20% | 25 | 25% |

FIGURE: 3: VIEWS OF THE HOIS ABOUT THE PROBLEM RELATED TO THEIR SCHOOLS





INTERPRETATION AND FINDINGS (TABLE- 3 AND FIGURE 3) :

The information received on views of the Heads of the Institutions about the problems related to their school indicates that –

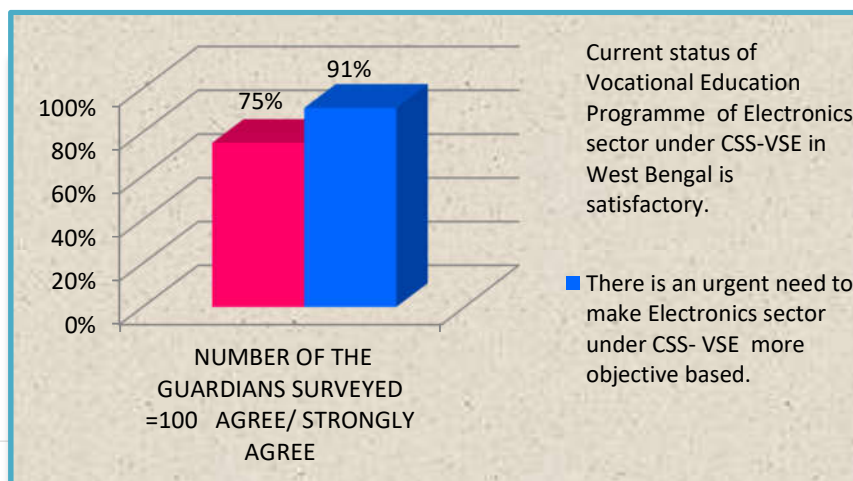
- 65% HOIs agree/ strongly agree and 30% HOIs disagree/ strongly disagree with the views that there is a gap between theory and practical in relation to Electronics Sector under CSS-VSE in West Bengal whereas 5% HOIs are neutral in that view .*
- 78% HOIs agree/ strongly agree and 16% HOIs disagree/ strongly disagree with the views that Electronics sector under CSS-VSE in West Bengal is preparing the students well for the working world but 6% HOIs are neutral in that view.*
- 58% HOIs agree/ strongly agree and 24% HOIs disagree/ strongly disagree whereas 18% of the HOIs are neutral with the views that Electronics sector under CSS-VSE in West Bengal is creating enough employment opportunities for the students .*
- 52% HOIs agree/ strongly agree and 29% HOIs disagree/ strongly disagree whereas 19% of the HOIs are neutral with the views that Current status of Electronics sector under CSS-VSE in West Bengal is satisfactory.*
- 55% HOIs agree/ strongly agree and 25% HOIs disagree/ strongly disagree whereas 20% of the HOIs are neutral with the views that Present curriculum including text books of Electronics sector under CSS-VSE in West Bengal is relevant and updated according*

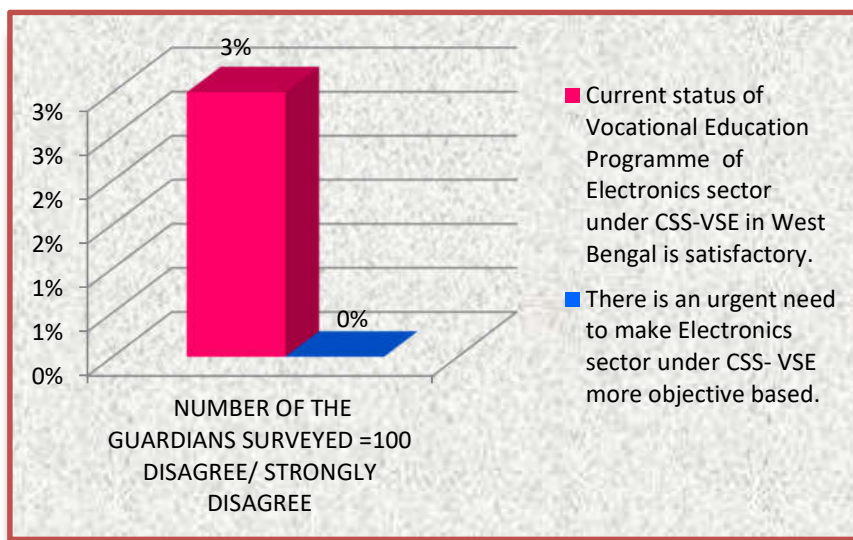
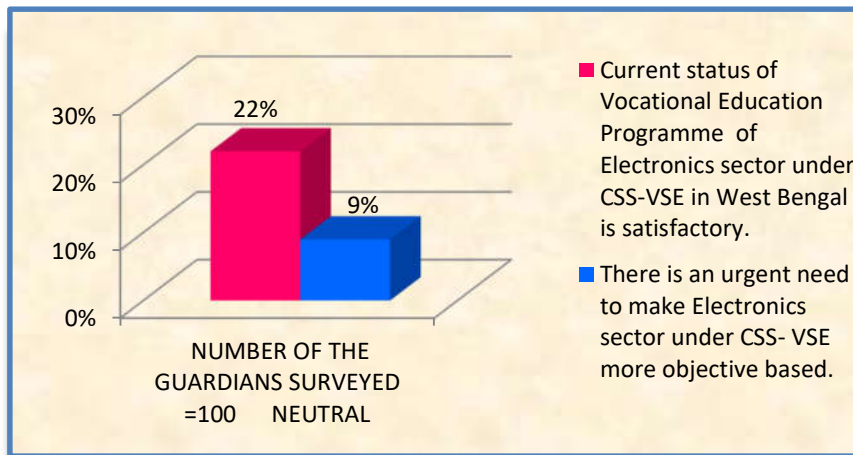
to the current needs in the employment sectors .

TABLE: 4 : VIEWS OF THE GUARDIANS ABOUT THE PROBLEMS RELATED TO THE ELECTRONICS SECTOR UNDER CSS-VSE IN WEST BENGAL

| SL NO | VIEWS OF THE GUARDIANS | NUMBER OF THE GUARDIANS SURVEYED =100 | | | | | |
|-------|---|---------------------------------------|-----|---------|-----|-----------------------------------|----|
| | | AGREE/ STRONGLY AGREE | % | NEUTRAL | % | DISAGREE/ STRONGLY DISAGREE | % |
| 1 | <i>Current status of Vocational Education Programme of Electronics sector under CSS-VSE in West Bengal is satisfactory.</i> | 75 | 75% | 22 | 22% | 3 | 3% |
| 2 | <i>There is an urgent need to make Electronics sector under CSS- VSE more objective based.</i> | 91 | 91% | 9 | 9% | 0 | 0% |

FIGURE: 4 : VIEWS OF THE GUARDIANS ABOUT THE PROBLEMS RELATED TO THE ELECTRONICS SECTOR UNDER CSS-VSE IN WEST BENGAL





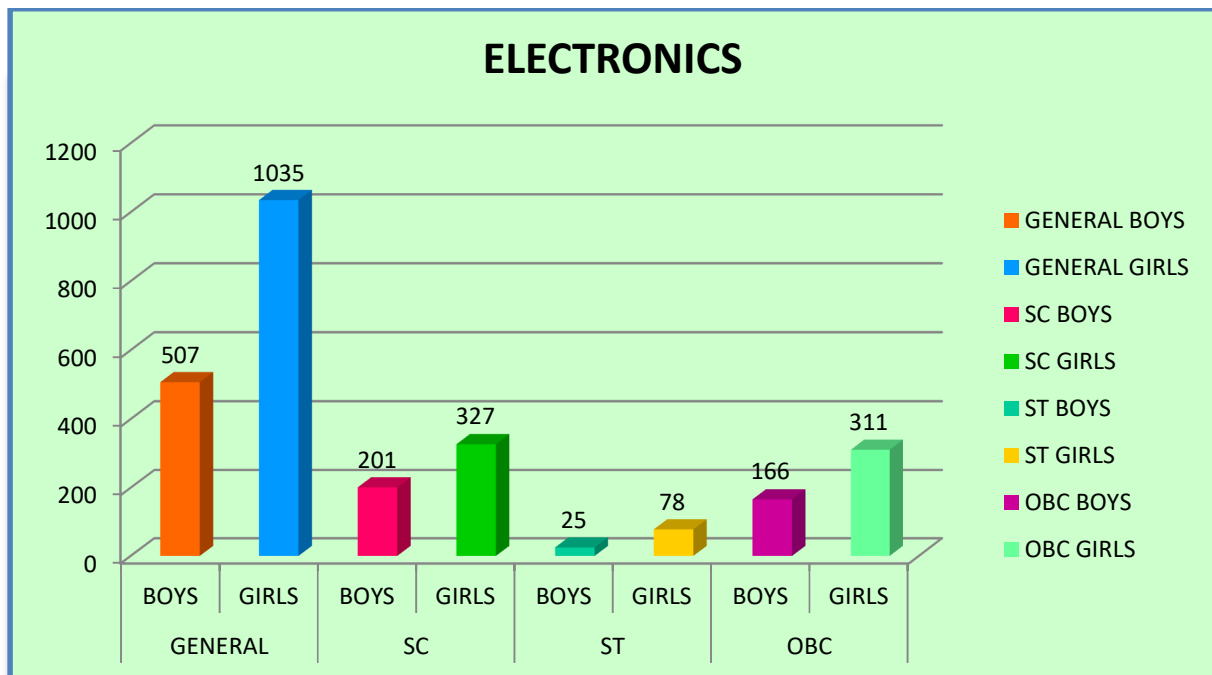
INTERPRETATION AND FINDING (TABLE-4 AND FIGURE-4)

- *The information highlights that 75% guardians of Vocational students agree/ strongly agree and 3% guardians disagree/ strongly disagree but 22% guardians are neutral with the views that current status of Electronics Sector under CSS-VSE in West Bengal is satisfactory.*
- *91% guardians of Vocational students agree/ strongly agree but 9% guardians are neutral with the views that there is an urgent need to make Electronics sector under CSS-VSE in West Bengal more objective based.*

Table: 5: Enrolment of Electronics Sector in Class IX for the Academic Year- 2018-2019 (Level-1 of CSS-VSE) under W.B.B.S.E

| SECTOR | GENERAL | | SC | | ST | | OBC | | TOTAL | |
|-------------|---------|-------|------|-------|------|-------|------|-------|-------|-------|
| | BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS | BOYS | GIRLS |
| ELECTRONICS | 507 | 1035 | 201 | 327 | 25 | 78 | 166 | 311 | 899 | 1751 |

Figure: 5: Enrolment of Electronics Sector in Class IX for the Academic Year- 2018-2019 (Level-1 of CSS-VSE) under W.B.B.S.E



Interpretation and findings (Table: 5 and Figure:5)

It is found that there are 2650 students admitted to class IX of State Board Schools (WBBSE) in the Academic year-2018 under CSS-VSE in West Bengal. Of them

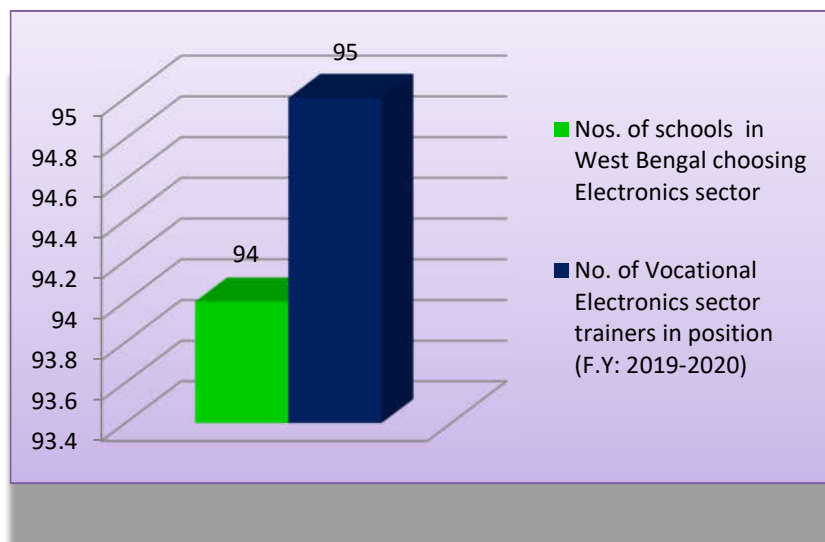
- *507 students are from general category of boys and 1035 students are from general category of girls.*

- 201 students out of total enrollment in class IX-2018 under W.B.B.S.E are from S.C category of boys and 327 students from S.C girls category.
- Whereas 25 students came from S.T category of boys and 78 students came from S.T category of girls.
- Thus 166 students came from O.B.C boys category and 311 students came from the category of O.B.C girls. 899 students are boys and 1751 are girls out of total 2650 students.

TABLE :8 VOCATIONAL TRAINERS OF ELECTRONICS SECTOR IN POSITION AS ON 31ST MARCH 2020

| Nos. of schools in West Bengal choosing Electronics sector | No. of Vocational Electronics sector trainers in position (F.Y: 2019-2020) |
|--|--|
| 94 | 95 |

FIGURE :8 VOCATIONAL TRAINERS OF ELECTRONICS SECTOR IN POSITION AS ON 31ST MARCH 2020



INTERPRETATION AND FINDINGS (TABLE:8 FIGURE: 8)

There are 95 Vocational trainers under 94 approved secondary schools in West Bengal under CSS-VSE (NSQF) for Electronics sector in 2019- 2020. But there are 112 trainers in all 112 approved Secondary Schools in West Bengal under CSS-VSE where Electronics Sector has been running in the Financial Year- 2020- 2021.

SUMMARY OF FINDINGS

A bridge summary of findings is presented so that one can easily look through the major findings of the study with a quick overview. Major findings are as follows:

- *This finding indicates that there are 676 approved functional secondary schools in West Bengal under CSS-VSE (NSQF) but there are 112 schools where Electronics sector has been running. There are 13 sectors running in approved secondary schools in West Bengal under CSS-VSE. Of them Electronics sector is the most wanted and highly demandable. 112 (8.28%) school authorities in West Bengal have opted to run Electronics sector for their schools in the Academic Year 2018. 899 boys and 1751 girls opted admission to class IX (Level-I) in the introducing year 2018 . There were 507 students are from general category of boys and 1035 students are from general category of girls, 201 students from S.C category of boys and 327 students from S.C girls category whereas 25 students came from S.T category of boys and 78 students came from S.T category of girls, 166 students came from O.B.C boys category and 311 students came from the category of O.B.C girls in 2018. There were 95 Vocational Trainers under 94 approved secondary schools in West Bengal under CSS-VSE (NSQF) for Electronics Sector in 2018 but there are 112 Vocational Trainers at 112 approved Secondary schools with Electronics Sector under CSS-VSE in West Bengal in 2021.*

DISCUSSION AND CONCLUSION

After going through discussions and findings it may be concluded that in West Bengal 112 approved secondary schools impart Vocational Education programme on Electronics sector under CSS-VSE but they do not have coordination among themselves. In fact a central data base should be created by which one can get full access of Vocational Education on Electronics sector from school level easily. Considering the importance of Electronics sector under CSS-VSE in West Bengal there is an urgent need to popularize and develop from the school level for the rapid growth of the country. To attract more students from School Level re orientation of

vocational courses is needed. There should be proper arrangements for e- library, equipments, tools and sector wise raw materials in approved and functional State Board Secondary Level Schools in West Bengal. Text books of different sectors should be supplied to the students under CSS-VSE at the beginning of the session. Loan facilities for self employment to the pass out students of Electronics sector should be arranged by both the central government and state government. The gap between theory and practical in relation to Vocational Education on Electronics should be filled in properly. There is a need to arrange pre -service and in-service training program for Electronics trainers to improve their vocational attitude. Electronics sector students have to adapt their employable skills and competences to the changing trends of advanced technology in the 21st century and fulfillment of demand of labour market.

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