



## CHAPTER IV: PROFILE OF VOCATIONAL EDUCATION PROGRAMME IN THE STATE OF GOA

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- The chapter is an elaborate study of the Vocational Education Programme in the state of Goa. It reviews the status of vocational education at the HSS and College level in terms of its infrastructure, curriculum and its teaching faculty.

## CHAPTER IV

### PROFILE OF VEP IN THE STATE OF GOA

#### **4.1 Social and Educational Background in the State of Goa:**

Goa was liberated in 1961 and was part of the union territory comprising of Goa, Damman and Diu. Goa was later elevated to the status of 25<sup>th</sup> state in the Indian Union on 30<sup>th</sup> May, 1987. Goa has two districts (North Goa and South Goa) and eleven talukas and a population of around 14 lakhs. Tourism, industry, fishery, mining, agriculture and service sector are the main economic activities of the state. The establishment of industrial and commercial schools at the time of liberation of Goa, Damman and Dui witnessed that the institutions were engaged in educating pupils in a particular occupational trade even before the liberation of Goa. The industrial Training Institute has made a marked diversion into vocational instructions at the school level in the following trades viz, carpenter fitter, electrician, turner, welder, motor machine, stenographer and tailoring & cutting.

Vocational education and training in various fields is been imparted through various educational institutions. These institutions vary form Government run to Private run institutions and include Polytechnics, Industrial Training Institutions, Home Science, Nursing Schools, Music, Dance and Drama schools, Drawing and Painting Institutions, Crafts and Handicrafts Schools, Catering and restaurant management schools, Special Schools and others. However the present study takes into consideration only those schools offering the vocational education programme under the plus two scheme of vocationalisation of education at the higher secondary school level and the UGC introduced vocational subjects at the degree level in colleges in the state.

## **4.2 Vocational Education Programme in the State of Goa:**

In view of the National recommendations, vocational education at plus 2 level was launched in Goa in the year 1988- 89. There were 10 courses introduced during the academic year 1988-89 at XIth standard. The courses were: Office Management, Accounting, Auditing and Taxation, Insurance, Industrial Management, Marketing and Salesmanship Management, Dressmaking Embroidery and Fashion Coordination, Auto Servicing Technology, Programme Assistant, Electronic Repair Technician and Electronic Assembling Technician. The total student enrollment was 835 during 1988-89. Two more courses viz. Food Production and Food and Beverage were introduced during 1989-90. Further two courses viz. Horticulture and Floriculture were introduced from the academic year 1997-98. Thus, the total number of courses till 1997-98 were 14 and were introduced in 43 Higher Secondary Schools as against 80 total higher secondary schools in the state. Later, 12 additional vocational courses had been approved by the Goa Higher Secondary Board. Out of the 12 courses, 5 courses viz. bakery & Confectionary, Health and Culture, Dairying, X-Ray Technician and Tourism and Travel Technique were sanctioned for introduction for the academic year 1999-00. The total number of students enrolled for the vocational courses for class XII during the academic year 1998-99 were 2025.

More importantly, based on the UGC recommendation in the Fifth Year Plan for restructuring of courses at the College level, out of 22 non-professional degree colleges in the State of Goa, 10 colleges have introduced UGC approved vocational subjects at the first year degree level in the disciplines of Science, and Commerce from the academic year 1994-95. The subjects were: Electronic equipment maintenance, Computer application, foreign trade and practice, tax

procedure, tourism and travel, biotechnology, advertising, sales promotion and sales management and industrial chemistry.

#### **4.3 Present Scenario of Vocational Education Programme in Goa:**

The present scenario of the VEP has changed drastically since the time of its inception the State. A number of vocational courses have been discontinued and there has been change in the nomenclature of some courses due to change in syllabus. Some others that have been similar have been amalgamated. A number of Higher Secondary Schools and Colleges have discontinued with some courses and new courses have been started by some. At present, there are a total of fifteen courses running in 40 HSS in Goa. The names of the courses are: Horticulture, Floriculture, Accounting, Auditing & Taxation, Office Secretaryship & Stenography, Insurance, Marketing & Salesmanship, Industrial Management, Maintenance & repairs of electrical & Electronic Domestic Appliances, Electronic Technology, Automobile Engineering and Technology, Computer Techniques, Catering & Restaurant Management, Bakery & Confectionary, Commercial Garment Designing & Making, Travel & Tourism, classified under five broad heads of Agriculture, Business & Commerce, Engineering & Technology, Home Science, and Humanities & others.

At the College level, there are a total of six courses offered in nine Colleges in Goa. The names of courses offered at the College level at present are Advertising, Marketing & Sales Promotion, Electronic Equipment Maintenance, Bio Technology, Industrial Chemistry, Computer Applications, and Travel & Tourism. The courses are classified under three broad heads of Business & Commerce, and Engineering & Technology. The vocational education programme at the colleges is now taking a different turn with the introduction of Add – On courses. The UGC had introduced add- on courses with a different

look and structure. These courses permit a student to continue with the general education with extra subjects besides that of the general stream curriculum. Students are awarded a Certificate Course or a Diploma Course depending on if they take the ad – on courses for the first year, for the first and second year, or for all three years. Like the restructured courses introduced by the UGC, these the Ad- on courses are also financed for a period of 5 years by the UGC. The present study is however based on the sample selected as explained in Chapter I and does not include the Ad- on courses.

#### **4.4 Management Structure:**

The Government of India introduced a Centrally Sponsored Scheme for Vocationalisation of Secondary Education in February 1988, so as to provide financial assistance to the States for effective implementation of the VEP at the HSS level in the country. The scheme has recommended a management structure at 3 levels in the State along with the functions and responsibilities at each level.

The management structure in Goa as proposed by the Government of India for the VEP at the HSS level does not exist in full as there is no body formed at the District level to look into the programme. It is however established at two levels. i.e. at the State level and at School level as given below:

##### **1. State Level:**

Directorate of Secondary Education	: Joint Director (Vocational Education); Technical Assistants
Goa Board of HSS Education	: Vocational Education Officer Supporting Staff

##### **2. District Level** : Nil

**3. School Level** : Vice Principal – Vocational Incharge;  
School Advisory Committee.

At the HSS level, usually the Vice – Principal is the Vocational Incharge and takes responsibility of the administration of the VEP in the Institute.

#### 4.4.1 Advisory Committee/ Review committee:

Despite all the attempts to make the VEP successful, there was an overall impression that the vocational courses were not so attractive to the public from the point of accepting them as professional in nature and also from the fact that job opportunities are not so easily available to vocational passouts in industrial organizations as well as Government departments. The Government therefore decided to review the vocational courses in order to make them more employable and acceptable to the present needs of the society. A review committee to review the vocational courses was therefore appointed by the State Government. The committee consisting of 10 representatives from various ministries and other organizations was formed at the HSS level to guide the Directorate of Education (Vocational Wing) in revision of curriculum and other decisions. The committee had been meeting from time to time and sees to the efficient functioning of the VEP. The committee had conducted 3 meetings so far and discussed related matters. Matters such as upgrading of some courses, amalgamation of some, while discontinuation of those not doing so well, reviewing of syllabus etc were issues discussed in the meetings. Besides, issues and problems arising and how to tackle them were also discussed.

Though at the HSS level, the monitoring system in terms of evaluation the courses and conducting meeting for discussion was found to be reasonably active, it is expected that the organizations and management bodies incharge should hold meetings more frequently and the suggestions made at the meetings need to be implemented immediately. Those in position of authority should see to it that the administrative staff maintains up to date records of the VEP in Goa.

They should follow up with the HSS offering the VEP and keep records information such as student enrollment, vocational students results, updated curriculum, personal information of students such as addresses etc, or any other relevant information of latest developments regarding the VEP in the State should be maintained. It was observed that up to date information was not maintained.

The management structure at the College level is placed in the hands of individual Colleges under the Goa University who directly correspond to the UGC. There is however no Management structure as seen above in the case of HSS level, either at the State, nor District level. Examinations are conducted by the college staff of the Goa University. Within the colleges, one of the lecturer teaching the vocational subject is usually appointed as Vocational Coordinator by the Principal, in order to look into the functioning of the programme, placement of students for OJT etc. There is no Administrative Body/ Officer Incharge at the State level that takes responsibility for the effective functioning of the vocational programme at the College level. This seems to be main reason for Colleges terminating the vocational courses at the College level. Hence, the monitoring system for the vocational programme at the Degree level is found to be very weak. Hence, it can be concluded from the above that the fourth hypothesis '*Monitoring system of the Vocational Education Programme is weak*' is found to be true in the case of the VEP at the College level and partially true in the case of HSS level.

#### **4.5 Funding:**

For the successful implementation of any programme there is need for finance. Under the Centrally Sponsored Scheme, the Central Government is responsible for the release of funds for creating infrastructure facilities like

purchase of required machinery, tools & equipment, raw materials, construction of work-sheds for training- cum- production centers etc. As per NCERT guidelines, on an average an amount of 75,000/- would be provided under the scheme per vocational course for acquiring necessary equipment/facilities. Some of the courses may not need this amount and the excess could be diverted to other courses where the need is larger. A maximum amount of 75000/- will be provided for construction of work sheds/ laboratories required for each vocational course. Maintenance of equipment will be the responsibility of the State Government.

The funding to institutions differs depending on the courses offered by the institution, number of students and teaching faculty. For instance, the funds required for Commerce & Business courses is much lesser than that of Science and Engineering courses. As the cost of raw materials, laboratory, work sheds etc. increase the financial requirements for these courses. Funds received, by institutions therefore differ depending on the course and the number of students enrolled for the particular course. The funds received varies from Rs.100 to Rs.200 per student. The State Government of Goa shoulders the responsibility of providing the necessary raw materials and consumable articles like chemicals and breakable wares that are critical for conducting practical training for vocational courses. It ensures that these consumables are provided to the institutions on a continuing basis.

The data on expenditure supplied by the institutions was not found to be very satisfactory as far as non-recurring expenditure was concerned. Also a number of institutions were unable to provide the break up or recurring expenditure. As disclosed by the Directorate of Education, the Central government has released Rs.111 lakhs under the CSS to the Government of Goa for construction of



classrooms, infrastructure, work sheds, raw materials etc. required for Higher Secondary Vocational Schools till 30<sup>th</sup> June 2001.

In the case of Colleges, funding to Institutions is only for the first 5 years of the implementation of the programme. After the 5 year period UGC funding ceases and it is then the responsibility of the individual institution to run the courses as self financed courses if necessary. Purchase of raw materials, consumables and other necessary equipments required in the smooth operation of the course, is then the responsibility of the Institute Management. This has been the main reason why most Colleges stop the course after the UGC funding ceases, as they are unable to meet the funds requirements. Other institutes that have a good student intake have continued with the courses as self-financed courses.

**Head of Educational Institutions and Teaching Faculties Outlook on Funds provided to the Institutions:**

Many Heads of educational institutions at the HSS and College level have stated that the funds available were inadequate to meet the requirements of the vocational courses. The teaching faculties also claimed that funds supplied to institutions were inadequate. 43 HSS teachers and 17 College teachers were of the opinion that, for the successful execution of the vocational courses, the vocational programme requires additional funding. At the HSS level, there were no major grievances expressed by those incharge. However, the common grievance expressed towards the funding of UGC at the College level, was that Colleges find it very difficult to continue with the expenses to run the courses effectively and efficiently after the UGC funding ceases. Some of the grievances expressed by them were:

1. Some of the Institutions offering Science based vocational subjects claimed that, the funding for vocational course coordinator should be increased. After the UGC funding has ceased, no remuneration has been paid to the coordinator.
2. After UGC funding ceased no new equipments can be bought because of inadequate funds available with the institution for purchase of new equipments.
3. After funding has ceased, it has becomes difficult for the institute to raise funds to conduct educational tours for courses like Travel & Tourism. The institute also finds it difficult to arrange funds to get guest lecturers on the subject who would give the students exposure of the industry.
4. Funds are required in order to update the Bio- Tech. Laboratory with latest equipments.
5. Some Heads of Educational Institutions suggested that after UGC funding stops, the State Government should take over and assist the Institutions in financing the courses.

#### **4.6 Course Curriculum:**

A good competency based curricula for the vocational education programme describes an approach to vocational training that focuses on the development of competency in the learner as the outcome or as the objective of the training, as it would produce graduates with employable skills.

The curriculum should be need – based, socially relevant and should lead to meaningful self or wage employment. The course structure should be such that it helps to develop suitable competencies including abilities for continuing education. The vocational education curriculum developed should be flexible. That is the curriculum should be flexible to the extent that it should be able to

introduce any changes in technology and eliminate any portion of it that goes obsolete with time, so that the students passing out are kept updated with the latest developments and are easily employed by industry. The course curricula should also be flexible in the context that it has curriculum written for one state has enough flexibility for it to be adapted to the needs and context of another state.

At the HSS level, the course curriculum for vocational theory and practice is in an integrated form, and is given nearly 70% of the total instructional time. The rest would be allocated to the study of languages and the foundational subjects related to the vocational course. A component of OJT is also visualized as an integral part of the curriculum. In order to have a broad uniformity in course structure and to maintain national standards for a given vocation, so as to promote larger mobility and acceptability of vocational products, it would be ensured that the curriculum incorporates a core of identified competencies in terms of knowledge and skills. The states may take the assistance of NCERT and use SCERT or other expert agencies to lay down competencies for various vocational courses. Table 4.1 below gives the Curriculum structure used by the Institutions in Goa at the HSS level for the vocational programme:

**Table No.4.1 Curriculum Structure adopted by HSS**

1	English or MIL	100 marks
2	GFC	50 marks
3	Vocational Theory 3 papers ( each of 50 marks)	150 marks
	Vocational Practical 3 papers (each of 50 marks)	150 marks
4	On – the - Job Training	50 marks
	Total marks .	500 marks

The curriculum structure for the vocational course at the College level is very different from that at the HSS level. Wherein, vocational students have to undergo 2 papers of the vocational subject opted by them, in place of the 2 papers offered in the general stream curriculum (the other general stream subjects remaining the same). Hence, these students undergo 2 papers of the vocational subject in each of the first two years of their degree education. However, students opting for the vocational subjects in the commerce stream, undergo 2 papers of the vocational subject in each of the three years of the degree course. The marks allotted for each paper is 100. The entrepreneurship development subject also carries a total of 100 marks. The entrepreneurship development subject is however not stressed upon by all Colleges offering the vocational course.

OJT is an integral part of the curriculum at the HSS level. While at the College level, not all Colleges provide OJT to the students. OJT was intended to give students the opportunity to experience real work situations in the industry or firms while studying. The General Foundation course taught at the HSS level is again a compulsory subject and was aimed to give students knowledge on entrepreneurship so as to assist students with knowledge that would aid them to start their own business enterprises. At the College level, the Entrepreneurship Development Subject (EDS) is introduced for the vocational students. However it was found that some Colleges offering the Science based vocational subjects did not offer the Entrepreneurship Development Subject to the students. The GFC/ ED subject was initiated to provide students with the necessary knowledge required to be acquired by them in case they intend to start up their own business enterprise. It also was meant to educate them of the business world.

### **Opinion of Various Respondents on the Vocational Curriculum:**

In order to evaluate the vocational curriculum adopted, it was necessary to seek the opinion of the various respondents on the prevailing vocational curriculum. Hence the Students, Teaching faculties, Heads of educational institutions and Industrialists involved with the vocational students were asked their opinion on the present vocational curriculum.

#### **4.6.1. Students Opinion on Curriculum:**

It was very important to get a feedback on the curriculum from the students studying the vocational course. Their feedback would not only indicate the stand of the curriculum in use, but would also be an evidence for the level of satisfaction of the students towards the course studied by them. Hence, HSS and College level Students were asked to give their opinion on the course curriculum for the vocational theory and vocational practicals subjects individually. This is because at times the practical curriculum is not wide enough to encompass all the essential requirements required to be taught to the students in order to obtain sufficient practical experience on a trade. Or at times, the practical or theory curriculum may include subject details that are outdated and are unnecessary. A combined opinion of the course curriculum would probably not fetch a fair opinion from the students regarding the curriculum. So students were asked to rank the curriculum for both the theory and practicals separately.

Hence, students were asked to give their opinion using three ranks. i.e. the students stated that the course curriculum studied by them was 'up to date' to meet the requirements of the job market or, if it 'needs improvement' or if according to them the curriculum was 'obsolete'. It was observed that most of the students were of the opinion that the course content was up to date. Table

No.4.2 and Table No.4.4 shows the opinion of students towards the curriculum of the vocational theory subject studied by HSS and College students respectively. While Table No. 4.3 and Table No.4.5 reveals the HSS and College students opinion on the course content of the vocational practicals respectively.

**Table No.4.2 HSS Student's Opinion on the Curriculum of Vocational Theory Subject**

<b>OPINION ON COURSE CURRICULUM OF VOCATIONAL THEORY SUBJECT</b>				
<b>Course Name</b>	<b>Up To Date</b>	<b>Needs Improvement</b>	<b>Obsolete</b>	<b>Total</b>
OSS	60 77.9%	14 18.2%	3 3.9%	77 100.0%
AAT	31 70.5%	13 29.5%		44 100.0%
INS	12 63.2%	7 36.8%		19 100.0%
MKT. & S	13 86.7%	1 6.7%	1 6.7%	15 100.0%
COMP.T	16 51.6%	10 32.3%	5 16.1%	31 100.0%
CGDM	32 53.3%	27 45.0%	1 1.7%	60 100.0%
CRM	25 73.5%	9 26.5%		34 100.0%
T & T.	15 100.0%			15 100.0%
AET	15 78.9%	4 21.1%		19 100.0%
MREEDA	26 68.4%	9 23.7%	3 7.9%	38 100.0%
ET	14 60.9%	9 39.1%		23 100.0%
INDUS.M	3 25.0%	9 75.0%		12 100.0%
FCL	4 40.0%	6 60.0%		10 100.0%
HCL	3 30.0%	7 70.0%		10 100.0%
B & C	11 100.0%			11 100.0%
<b>Total</b>	<b>280</b>	<b>125</b>	<b>13</b>	<b>418</b>
<b>Total %</b>	<b>67.0%</b>	<b>29.9%</b>	<b>3.1%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be viewed from the table above that a majority of the HSS students of most of the courses have claimed that the syllabus for the vocational theory is up to date. Only students of the Horticulture (HCL), Floriculture (FCL) and Industrial Management (INDUS.M) courses have a majority of the students studying the course who claim that the course curriculum requires improvement.

**Table No.4.3 HSS Student's Opinion on the Curriculum of Vocational Practicals**

OPINION ON COURSE CURRICULUM OF VOCATIONAL PRACTICALS				
Course Name	Up To Date	Needs Improvement	Obsolete	Total
OSS	62 80.5%	12 15.6%	3 3.9%	77 100.0%
AAT	34 77.3%	8 18.2%	2 4.5%	44 100.0%
INS	15 78.9%	4 21.1%		19 100.0%
MKT. & S	14 93.3%		1 6.7%	15 100.0%
COMP.T	26 83.9%	4 12.9%	1 3.2%	31 100.0%
CGDM	50 83.3%	10 16.7%		60 100.0%
CRM	20 58.8%	14 41.2%		34 100.0%
T & T.	13 86.7%	2 13.3%		15 100.0%
AET	7 36.8%	12 63.2%		19 100.0%
MREEDA	23 60.5%	12 31.6%	3 7.9%	38 100.0%
ET	16 69.6%	7 30.4%		23 100.0%
INDUS.M	5 41.7%	7 58.3%		12 100.0%
FCL	7 70.0%	2 20.0%	1 10.0%	10 100.0%
HCL	5 50.0%	5 50.0%		10 100.0%
B & C	9 81.8%	2 18.2%		11 100.0%
<b>Total</b>	<b>306</b>	<b>101</b>	<b>11</b>	<b>418</b>
<b>Total %</b>	<b>73.2%</b>	<b>24.2%</b>	<b>2.6%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be observed from Table No.4.3 that 63.2% and 58.3% of students studying the AET and Industrial Management courses respectively express their concern that the practicals curriculum of the course needs improvement. It is observed from Table No.4.2 and Table No.4.3 that, on the whole 67% and 73% of the HSS students express their satisfaction towards the course content of their vocational theory and vocational practical subjects respectively by stating that the syllabus is up to date.

Table No.4.4 and Table No.4.5 below shows the responses given by students studying the vocational course at the College level. It can be seen that, 62.9% and 67.1% of the College students were not very satisfied with the vocational theory and practical course syllabus respectively. They were of the opinion that the course curriculum requires improvement.

**Table No.4.4 College Students Opinion on the Curriculum of Vocational Theory Subject.**

OPINION ON COURSE CURRICULUM OF VOCATIONAL THEORY SUBJECT				
Course Name	Up To Date	Needs Improvement	Obsolete	Total
I. CHEM	5 18.5%	22 81.5%		27 100.0%
B.TECH.	4 20.0%	16 80.0%		20 100.0%
COMP. A.	7 25.0%	16 57.1%	5 17.9%	28 100.0%
EEM		1 50.0%	1 50.0%	2 100.0%
T & T	7 36.8%	9 47.4%	3 15.8%	19 100.0%
ADVT. & S.	17 47.5%	19 52.5%	0 0.0%	36 100.0%
Total	40	83	9	132
Total %	30.3%	62.9%	6.8%	100.0%

\* Source: Primary Survey



**Table No.4.5 College Students Opinion on Curriculum of Vocational Practicals**

OPINION ON COURSE CONTENT OF VOCATIONAL PRACTICALS				
Course Name	Up To Date	Needs Improvement	Obsolete	Total
I.CHEM	9 34.6%	14 53.8%	3 11.5%	26 100.0%
BIO-TECH	1 5.9%	16 94.1%		17 100.0%
COMP APP	5 21.7%	17 73.9%	1 4.3%	23 100.0%
EEM			2 100.0%	2 100.0%
ADVT.& S.			2 100.0%	2 100.0%
<b>Total</b>	<b>15</b>	<b>47</b>	<b>8</b>	<b>70</b>
<b>Total %</b>	<b>21.4%</b>	<b>67.1%</b>	<b>11.4%</b>	<b>100.0%</b>

\* Source: Primary Survey

#### 4.6.2 Teachers Opinion on Curriculum:

The Teaching faculty instructing the particular vocational courses were also asked their opinion on the course curriculum. They were asked their opinion on the course curriculum of the course taught by them. When asked if the course curriculum required improvement, 64.6% of the HSS teachers and 40% of the College teachers stated that the course curriculum did require improvement.

The Teaching Faculties was also asked their opinion as to how relevant the vocational course taught by them was to meet the needs of the present industry. They were asked whether the course contents were 'Very Relevant', 'Fairly Relevant', or 'Not Relevant'. Table No.4.6 and Table No.4.7 below shows the responses of the HSS and College level teachers respectively.

**Table No.4.6 HSS Teachers Opinion on the Relevance of the Vocational Course Taught.**

OPINION ON THE RELEVANCE OF THE VOCATIONAL COURSE TAUGHT				
	Very Relevant	Fairly Relevant	Not Relevant	Total
Agriculture	0 0.0%	2 100.0%	0 0.0%	2 100.0%
Commerce	14 87.5%	2 12.5%	0 0.0%	16 100.0%
Engineering	12 70.6%	5 29.4%	0 0.0%	17 100.0%
Home Science	9 75.0%	3 25.0%	0 0.0%	12 100.0%
Humanity	1 100.0%	0 0.0%	0 0.0%	1 100.0%
<b>Total</b>	<b>36</b>	<b>12</b>	<b>0</b>	<b>48</b>
<b>Total %</b>	<b>80.0%</b>	<b>20.0%</b>	<b>0.0%</b>	<b>100.0%</b>

\* Source: Primary Survey

**Table No.4.7 College Teachers Opinion on the Relevance of the Vocational Course Taught**

OPINION ON THE RELEVANCE OF THE VOCATIONAL COURSE TAUGHT				
	Very Relevant	Fairly Relevant	Not Relevant	Total
Commerce	3 75.0%	1 25.0%	0 0.0%	4 100.0%
Engineering	10 66.7%	5 33.3%	0 0.0%	15 100.0%
Humanity	1 100.0%	0 0.0%	0 0.0%	1 100.0%
<b>Total</b>	<b>14</b>	<b>6</b>	<b>0</b>	<b>20</b>
<b>Total %</b>	<b>70.0%</b>	<b>30.0%</b>	<b>0.0%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be observed from the tables above that none of the teaching faculty were of the view that the course content of the subject taught was not relevant. The tables reveal that 80% of the HSS teaching faculties and 70% of the College teaching faculties felt that the course content was relevant to meet the demands of the industry.

#### 4.6.3 Educationalists and Industrialists Opinion on Curriculum:

Educationalists as well as Industrialists were asked their opinion on the course curriculum taught for the VEP. They were asked to rank the curriculum as either

'Up to Date' to meets the requirements of the labour market, 'Needs improvement', or 'Obsolete'. Table No. 4.8 and Table No.4.9 below show the responses given by the Head of educational institutions and by the Industrialists respectively.

**Table No.4.8 Heads of Educational Institutions Opinion on Vocational Course Curriculum**

OPINION OF VOCATIONAL COURSE CURRICULUM				
	HSS level courses		College level courses	
	(f)	Total %	(f)	Total %
Up to Date	7	36.8%	4	44.4%
Needs Improvement	12	63.2%	5	55.6%
Obsolete	0	0.0%	0	0.0%
Total	19	100%	9	100%

\* Source: Primary Survey

**Table No.4.9 Industrialists Opinion on the Vocational Course Curriculum**

INDUSTRIALISTS OPINION ON VOCATIONAL COURSE CURRICULUM				
Course Name	Up to Date	Needs Improvement	Obsolete	Total
Commerce	1 7.7%	8 61.5%	4 30.8%	13 100.0%
Engineering	4 26.7%	8 53.3%	3 20.0%	15 100.0%
Humanity	0 0.0%	4 100.0%		4 100.0%
Agriculture		1 50.0%	1 50.0%	2 100.0%
Home Science	2 33.3%	4 66.7%		6 100.0%
Total	7	25	8	40
Total %	17.5%	62.5%	20.0%	100.0%

\* Source: Primary Survey

Table No. 4.8 reveals the responses given by the Heads of Educational Institutions at the HSS as well as College level. In the case of Head of educational institutions at the HSS level, 63.2% and 55.6% at the College level were of the opinion that the course curriculum required further improvement.

While in the case of the responses given by Industrialists in Table No.4.9, 62.5% of them expressed that the course required improvement and just 17.5% said it was up to date.

It can be observed from the above two tables that, a majority of the Head of educational institutions as well as Industrialists are of the opinion that the vocational curriculum needs improvement. They were of the opinion that the curriculum needs to be revised regularly.

#### Revision of Curriculum:

At the HSS level, the curriculum had been framed by the NCERT but had been adopted by the States after making necessary changes to suite the local requirements of the State. Heads of Educational Institutions at the HSS level claimed that the syllabus has been lately revised in the year 2001-02. Some of the Principals also claimed that their Teaching Faculty had personally visited the Industries to know the requirements of the Industry before reviewing the syllabus, but also claimed that they syllabus however requires further revision. However, at the College level, some of the Heads of Educational Institutions claimed that the syllabus has never been revised form the time vocational subjects were introduced in the State. The reason behind this they said, was because the curriculum for vocational subjects adopted by the institutions was that send by the UGC. There was no Management Body in between the UGC and the Institution that claimed responsibility for reviewing of the Syllabus. However, some Principals claimed that decisions were taken by the University to revise the syllabus. Principals did claim that only instructional material has been prepared by their teaching faculties to enable them to teach the courses more effectively.

**Suggestions made by the Heads of Educational Institutions & Teaching Faculty on Changes to be made in the Curriculum:**

At the HSS level some of the Educationalists and Teaching Faculty expressed their concern towards changes to be made in the Curriculum that would improve the credibility of the course. Some of the commonly expressed suggestions were as follows:

1. The OSS course needs to be revised and modern Office Management know – how should be made part of the curriculum.
2. The General Foundation Course syllabus needs to be made more practical providing a link between On the Job Training and GFC.
3. Travel & Tourism course needs to stress on good Communication skills for students.

At the College level it was observed that the number of Educationalists and Teaching Faculty that expressed their concern towards changes to be made in the Curriculum were far greater than that at the HSS level. The syllabus needs to be revised to meet the needs of the local industry was a common comment made by most concerned with the teaching of the subject.

1. In the case of Industrial Chemistry the suggestions made were: the Syllabus should be flexible to include local needs.
2. The Industrial Chemistry course should include more of practical work so that more industrial experience can be added.
3. The subject combinations in the case of Industrial Chemistry should be more flexible, so that students have a wider subject combination to choose from. Teaching Faculty are of the belief that because of the rigid subject combination there are very few takers for the course. UGC should give additional subject combinations for e.g. Physics – Chemistry - Industrial

Chemistry in addition to the only prevailing combination that is provided i.e. Maths – Chemistry – Industrial Chemistry.

4. The Travel & Tourism course needs to be more practical oriented. The course content should compulsorily include OJT and a have a more practical approach so that there is more interaction with the industry.
5. All vocational courses should make OJT compulsory which will encourage students to take interest in the OJT provided.
6. Syllabus of the Bio – Technology course needs to be updated to include the latest techniques and developments.
7. Syllabus of all courses should be changed every two – three years, after studying the changes and developments introduced in the industry. Teachers too should be trained to teach the updated syllabus and be encouraged to learn the latest developments. The teaching faculty should be also given regular training and industrial experience so that they can teach the course more efficiently.
8. Teaching faculty concerned with teaching of Science based vocational subjects of EEM and Comp Applications suggested that instead of studying extra papers of vocational, these papers should be made part of their regular B.Sc.
9. The syllabus of Industrial Chemistry should include a Center for Production of goods and services and this has to be included as part of the practical work for students.
10. Field trips should be arranged to visit out of state industries and Pharmaceuticals.
11. Entrepreneurship development subject should compulsorily include practical experience in addition to the theory.
12. Syllabus should be based as per local needs of the state in consultation with Industrialists and other organizations like the GCCI etc.

Hence it can be concluded that, on the whole the HSS students of most courses seem to be satisfied with the vocational curriculum provided to them with the exception of students of few courses. Whereas majority of the students at the College level, feel the curriculum requires improvement. Majority of the Teaching faculty at the HSS and College level is of the opinion that the curriculum is relevant to meet the requirements of the job market. While a majority of the Heads of Educational Institutions at the HSS and College level as well as the Industrialists claimed that the syllabus needs improvement.

#### **4.7 Students Enrollment:**

The success of a course is seen clearly on the student strength for the courses carried out. The enrollment of students in a particular course would hence show the demand for the course. And a course would have demand depending on its ability to impart knowledge and training that is required for students to fetch the kind of job they are looking for, or to help them in their further education. It has been observed that a number of courses have high enrollment while others have poor enrollment because of which they have to be terminated by the institutions running them. From 1988-89 to 2000- 2001, twelve batches have completed the courses at the HSS level.

The Source of the enrollment details of students was taken from the Goa Board of Secondary Education. These enrollment details are shown in Appendix – IV and in Appendix VI. In the case of the vocational programme at the College level, enrollment details are shown in Appendix V and in Appendix – VII. Details from the year 2001 to date were however not kept by the Board and hence were personally collected from individual institutions. However the details of the enrollment from the year 2000 – 01 to 2003 – 04 are only of institutions selected for the study. The enrollment of vocational education students at the HSS and

College level of most courses is found to be satisfactory with the exception of the EEM course at the College level. It was learnt that the vertical mobility for the course was poor. Students of vocational Electronics at HSS were not able to join the course and students of EEM on completion of the course had very little scope for vertical mobility upwards. Hence the enrollment was very poor with just 3 students currently studying the course.

#### 4.7.1 Vertical Mobility:

Courses should be designed such that they allow easy vertical mobility into higher education to students that join the VEP. Vertical Mobility of courses is an important factor that determines a student's choice for choosing the vocational stream. It has been observed that the courses that have an easy vertical mobility have greater student enrollment. Many a times students realize that specializing in a particular vocational course would put a dead end in their educational career, least the specialization area has no much scope for job opportunities or for any other reason such as their late decision to change their course of education. Hence, students prefer not to opt for vocational courses that have poor vertical mobility. The Goa University has granted vertical mobility for the students wishing to pursue higher education. Hence, student community should be made aware of the various options available to them in case they do want to go in for graduation or even join a Polytechnic on completion of their vocational course.

Vertical mobility would be enhanced when students are provided with a link to courses at the graduation level which are a continuation to the course studied by the students at the plus two level. For instance students of Computer Technology course on completion of their course should be enabled to join a course with similar subjects at the graduation level. The curriculum of the course at the graduation level should provide further knowledge or a link to the course



studied at class XII. The vocational courses introduced at the College level should be such that they provide an opportunity for further exposure to practical and theoretical knowledge to the vocational students of the plus two level.

As mentioned earlier, it is a discouraging fact to have an enrollment of just 3 students on the EEM course at the College level. The reason behind this is that students who opt for the Electronic Technology course at the plus two level, are not permitted to take up the Electronic and Electrical Maintenance course at the College level despite their strong desire to join it. While on the other hand the course at the EEM course at the College level, which is running with hardly any takers and will be soon terminated. This can be only understood as a lack in the proper implementation of the programme at the Management level. As per the ordinance, the University has granted permission for vertical Mobility to the students opting the Electronic course at the HSS level to join the EEM vocational course at the Graduation level. But however the students have to clear an entrance test for which the ordinance makes no mention of who is to conduct the entrance test. As no party seeks responsibility to conduct the entrance exam, the HSS Students passing form the Electronic course are unable to seek admission to the EEM course.

The Table No. 4.10 shows the vertical mobility available to HSS students passing the vocational courses as per the circular issued by the Registrar of Goa University in June 2002, informing Principals of Colleges to grant vertical mobility to vocational students.

**Table No.4.10 Vertical Mobility Chart**

S.No.	Vocational Subjects	Courses Available for Vertical Mobility
1	Office Secretary ship & Stenography	BA/B.Com/ B.Com UGC (Vocational Courses)
2	Accounting, Auditing & Taxation	BA/B.Com/ B.Com UGC (Vocational Courses)
3	Insurance	BA/B.Com/ B.Com UGC (Vocational Courses)
4	Industrial Management.	BA/B.Com/ B.Com UGC (Vocational Courses)
5	Marketing & Salesmanship	BA/B.Com/ B.Com UGC (Vocational Courses)
6	Commercial Garment Designing & Making	BA/B.Com/B.Sc.(H.Sc.)
7	Catering & Restaurant Management	BA/B.Sc.(H.Sc.)
8	Maintenance & repairs of electrical & Electronic Domestic Appliances	Diploma in Electronics/ BA/ B.Sc./BSc.(Electronics), B.Sc.(UGC Vocational EEM, provided the student pass an Entrance Test)
9	Electronic Technology	Diploma in Computer Eng./ BA/B.Sc./B.Sc.(Electronics), B.Sc.(UGC Vocational EEM, provided the student pass an Entrance Test)
10	Automobile Engineering and Technology	Diploma in Automobile Eng./ BA/B.Sc.

11	Computer Techniques	BA/B.Com./B.Sc./ B.Sc (H.Sc.), B.Sc.(Computer Science)
12	Horticulture	BA/B.Sc.
13	Floriculture	BA/B.Sc.
14	Bakery & Confectionary	BA/B.Sc.(H.Sc.)
15	Tourism & Travel Techniques	BA/B.Com or any other Tourism based course

\* B.Sc. (H.Sc.) – Bachelors in Home Science.

\* Source: Circular issued by the Registrar of Goa University to the Colleges in June 2002.

#### **4.8 Student Evaluation, Performance and Accreditation:**

Evaluating a student for his performance is a crucial aspect. The student's performance should be fairly judged, not just based on the student's classroom performance but also the student's performance for OJT and practical work. Students should not only be evaluated by the teaching faculty teaching them from the Institute but also by the OJT instructors for the OJT undergone by them. The common practice observed in most institutions is that the OJT instructors inform the concerned Teaching faculties about the performance of the student and the teaching faculty then give them the grade. This somehow doesn't seem to be a very reliable way of grading students.

However, a student's performance towards the theory and practicals conducted in the institute are reflected in their examination results and in their interest level to learn the course studied by them. Table No. 4.21 and Table No.4.22 in this chapter give the HSS and College teachers' opinion on the students attitude and interest level towards the course studied by them. While, Annexure- II and Annexure- III shows the HSS and College Students

examination results over the last 4 years respectively. i.e. from 2000-01 to 2003-2004.

#### 4.8.1. Accreditation:

Accreditation is equally important for the success of each course. It acts as a motivator to the parties involved. It encourages the Principal, Teaching Faculty and above all, motivates the students to strive to do better.

Certification on efficient completion of the course should be fairly done. The vocational student's final certificate/ marksheet at the end of course should be different form that of the students passing out form the General stream. It was learnt that the vocational students Certificate does show the OJT, where in the students are given grades depending on their performance. This encourages students to take interest in the OJT. This is also beneficial to the students at the time of employment. Employers can know the students capability seeing the certificate.

Accreditation in the form of awards also is equally necessary. PSSCIVE gives awards for promotion of VEP to deserving students, teachers and institutions in order to encourage them so that they strive to achieve the objectives of the VEP. Awards are given in different categories to the "Best Student Achiever Award", 'Second Best Student Achiever Award', 'Best Vocational Teacher Award', 'Best Institution Award' and 'Best School – Industry Linkage Award'. These awards are given annually at the PSSCIVE Foundation Day Celebration and the award ceremony is hosted in Bhopal, where award winners from various States and Union Territories are personally invited to collect their award. They receive trophies and cash prizes as recognition for their hard work and sincere effort.

#### **4.9 Career Guidance:**

The emphasis on vocationalisation of secondary education, especially at the +2 stage has necessitated realistic guidance programmes for students in their late adolescent period. Many a time students realize too late in their educational career that their decision of opting for a particular stream or course was incorrect. To avoid this kind of a situation, it is important to establish an efficient Career Guidance Cell in the Institutions, which would enable students to take cautious and realistic decisions warranted by the demands of a situation and commensurate with one's potentials.

The guidance and counseling programmes should be also capable of assisting vocational students in making the right choice of course at the time of admission, it should also assist them in decisions at the end of their course, such as, what kind of employment to pursue, how to start their own small enterprise and how to go about establishing one etc. Students should be guided in decisions like these after keeping in view the ability of an individual student and also the social and economic family background of the student. Career Guidance cells are made compulsory in HSS offering the VEP. In order to train guidance personnel appointed to guide students, organizations such as the NCERT, the State Bureau of Guidance, Ministry of Education, and certain universities run training of one year duration.

As per the NCERT recommendations, the vocational guidance activities of the school will have two broad objectives:

- 1) In providing necessary guidance to students, parents and teachers regarding suitable educational and vocational choices.
- 2) In helping in actual administration and smooth functioning of the scheme.

One trained graduate teacher in each vocational institution should be trained in vocational guidance to carry out these functions. One trained counselor should be appointed at the district level to organize and run the career advice centre and assist the vocational guidance teacher at the school level.

It was observed that in reality, institutions have not made a serious attempt in providing the necessary career guidance facilities to their students. Heads of Educational Institutions were asked if they had established a Career Guidance Cell. All the Heads of Educational Institutions at the HSS claimed that they had established a Career Guidance Cell, but very few had trained Career Guidance Counselors appointed. The regular HSS teaching faculties were appointed as Counselors with most of them not having any formal training. At the College level, Career Guidance Cell was not a compulsory feature of the vocational programme. Hence, just a few Colleges were found to have their regular Career Guidance Cell that offered Career Guidance to all their students.

#### **4.10 Course Demand:**

Institutes in Goa both at the HSS level as well as College level offer a variety of vocational courses. An attempt was made in studying which were the most preferred courses and the reason why students choose the vocational course they are studying. Table No.4.11 below shows the number of HSS and Colleges offering the various VE courses that were covered in the study. The courses are also shown under their respective broad Course Areas.

**Table No.4.11 Institutions Offering the Various Vocational Courses**

<i>S.No.</i>	<i>Course Area</i>	<i>Courses offered at the HSS level under the VEP</i>	<i>No .of HSS offering the courses</i>	<i>Courses offered at the College level under the VEP</i>	<i>No. of Colleges offering the courses</i>
1	Agriculture	HCL FCL	1 1	-	-
2	Business &Commerce	AAT OSS INS MKT.& S. INDUS..M	7 9 2 1 1	ADVT.& S	2
3	Engineering & Tech.	MREEDA ET AET COMP. T	3 3 3 3	EEM BT IC COMP.A.	1 2 3 3
4	Home Science	CRM B & C CGDM	3 1 7	-	-
5	Humanities & others	T&T	1	TT	1
<b>Total</b>		<b>15</b>		<b>6</b>	

A course that is been offered by maximum number of institutes would reflect the demand for that course. It can be spotted in the table above that, a total of 15 vocational courses are being taught in HSS and 8 vocational subjects at the College level in the various disciplines of Arts, Science and Commerce disciplines. Of these, the course of Office Secretary ship & Stenography is offered by 9 HSS, followed by the Accounting, Auditing & Taxation course and the Commercial Garment Designing & Making both having 7 institutions offering the course. This shows the wide demand for the two courses among HSS. In the case of the vocational courses at the College level, the number of

courses are limited and the institutes offering the courses vary from just one to a maximum of three College for a particular course.

The reasons for the demand for the course could be varied and would differ from student to student. The most common stand students base their decision making when selecting a course is the employability potential of the course.

#### 4.10.1 Students Interest to Join the Vocational Course:

An attempt was also made to find out the reason for which the students opted the particular vocational course. Students were given various alternatives to choose from as their reason for choosing the vocational course.

The options framed were aimed in finding out if the reason behind opting for a particular course was sincere liking for the subject, or if it was because they felt the course had scope for employment, or if it was just that they were left with very little option and hence were forced to opt for the course because of limited vocational courses offered by that institute, or other reasons such as, they did not get admission into the course of their choice. The last option given to find out if they used the vocational stream as a means to get into higher education as they didn't get admission into the general stream of that institute (this was found to be in the case of some students at the HSS level who do not get admission in a particular institute due to their low percentage score at class X). Table No 4.12 and Table No. 4.13 below give the reasons mentioned by HSS and College students respectively for choosing the vocational course. The reasons stated by the students were studied group wise.



**Table No.4.12 Main Reason for Opting for a Particular Vocational Course  
(HSS Student's Response)**

REASON FOR OPTING FOR PARTICULAR VOCATIONAL COURSE							
	Liking for the subject	Scope for employment	Limited choice of courses offered by HSS	Didn't adm. in get VC u wanted	Didn't get into General Stream	Other Reasons	Total
Commerce	29 17.4%	118 70.7%	2 1.2%	7 4.2%	11 6.6%		167 100.0%
Engineering	24 21.6%	77 69.4%	1 0.9%	5 4.5%	2 1.8%	2 1.8%	111 100.0%
Humanity	2 13.3%	9 60.0%		3 20.0%	1 6.7%		15 100.0%
Agriculture	6 30.0%	7 35.0%	4 20.0%		3 15.0%		20 100.0%
Home Science	33 31.4%	66 62.9%	2 1.9%	1 1.0%	2 1.9%	1 1.0%	105 100.0%
<b>Total</b>	<b>94</b>	<b>277</b>	<b>9</b>	<b>16</b>	<b>19</b>	<b>3</b>	<b>418</b>
<b>Total %</b>	<b>22.5%</b>	<b>66.3%</b>	<b>2.2%</b>	<b>3.8%</b>	<b>4.5%</b>	<b>0.7%</b>	<b>100.0%</b>

\* Source: Primary Survey

**Table No.4.13 Main Reason for Opting for a Particular Vocational Course  
(College Student's Response)**

REASON FOR OPTING FOR PARTICULAR VOCATIONAL COURSE							
	Liking for the subject	Scope for employment	Limited choice of courses offered by College	Didn't get in professional College	Didn't want to opt for General Stream	Other Reasons	Total
Commerce	16 44.4%	16 44.4%	1 2.8%	1 2.8%	1 2.8%	1 2.8%	36 100.0%
Engineering	18 23.4%	51 66.2%	1 1.3%	2 2.6%	4 5.2%	1 1.3%	77 100.0%
Humanity	3 15.8%	16 84.2%					19 100.0%
<b>Total</b>	<b>37</b>	<b>83</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>132</b>
<b>Total %</b>	<b>28.0%</b>	<b>62.9%</b>	<b>1.5%</b>	<b>2.3%</b>	<b>3.8%</b>	<b>1.5%</b>	<b>100.0%</b>

\* Source: Primary Survey

It is observed in the tables above that 66.3% of HSS students and 62.9% of College students claimed that they joined the course because they felt it had scope for employment opportunities. The next highest percentage is seen in the students choosing a particular vocational course because of the students individual liking for the particular subject opted for. There was however a minority of students who had other reasons for choosing the particular vocational course.

Hence, it can be said that the demand for a particular course depends on the employment potentialities the course provides.

#### **4.11 Infrastructure Facilities:**

For the success of any course the required infrastructure is a must. To provide the required infrastructural facilities for Practical Training and for Classroom teaching is a obligation on the part of the institute offering the vocational course. Besides having the adequate tools, equipments and machines as per requirements of the course taught, the institute should also be able to provide the students with a functional laboratory/workshop with the required place for practical training. A comfortable classroom sufficiently well lit with adequate furniture. The necessary teaching aids to make the course more effective, well equipped laboratories. A reasonably good campus that promotes all round development of the student and besides all this the institute should have scope for further expansion.

#### **Opinion of Various Respondents on the Infrastructure provided by the Institute:**

In order to evaluate the infrastructure provided by the institute, it was necessary to seek the opinion of those using it. Hence, the student and teaching faculties were asked their opinion on the infrastructure available in the institute.

#### 4.11.1 Students Opinion on Infrastructure:

The response given by the Students respondents would hold more weightage as regards evaluation of the infrastructure as they are the ones who should feel satisfied with it. HSS and College students were asked to rank the infrastructure provided in their respective institutions. They were asked to rank the infrastructure that was relevant to their particular course besides that what was common to students of all courses, such as the Campus and Classrooms. Students were asked to rank the infrastructure giving one of the four ranks depending on their level of satisfaction with the infrastructure available. The ranks were: 'Excellent, Good, Satisfactory and Poor.'

Table No.4.14 and Table No.4.15 below display the ranks given by the students for the infrastructure provided to them in their institute at the HSS and College level respectively. The infrastructure for which the students have given the rank for is displayed in the extreme left column. The last row of the table displays the total responses of the students along with the total percentage of students that have ranked the infrastructure as, 'Excellent, Good, Satisfactory or Poor'.

It can be seen in the tables below that the total number of students that have ranked infrastructure such as, Laboratory equipments, Computers and Tools & equipment in the case of HSS, are found to be less, i.e. there were a lot of missing values. The reason for that is the students have not responded due to the non usage of the same in the course opted by them. It is only the students of the science courses that are found to use Laboratory equipments. The same applies in the case of the missing values in Table No. 4.15 which gives responses from College students respondents.

**Table No.4.14 HSS Students Opinion on Infrastructure in Institution.**

<i>Infrastructure</i>	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Poor</i>	<i>Total responses</i>
Class rooms	77 18.4%	191 45.7%	96 23.0%	54 12.9%	418 100%
Laboratory equipment	62 24.8%	112 45.0%	65 26.2%	10 4.0%	249 59.6%
Computers	128 32.5%	187 47.5%	59 15.0%	20 5.1%	394 94.2%
Library facility	105 25.1%	203 48.6%	83 19.9%	27 6.5%	418 100%
Tools & Equipment	61 21.5%	138 48.6%	69 24.3%	16 5.6%	284 67.9%
Campus	87 20.8%	126 30.1%	134 32.1%	69 17.0%	418 100.0%
Total Responses	520	957	506	196	2181
<b>Total %</b>	<b>23.8%</b>	<b>43.9%</b>	<b>23.2%</b>	<b>9.0%</b>	<b>100.0%</b>

\* Source: Primary Survey

**Table No.4.15 College Students Opinion on Infrastructure in Institution.**

<i>Infrastructure</i>	<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Poor</i>	<i>Total responses</i>
Class rooms	16 12.1%	49 37.1%	42 31.8%	25 18.9%	132 100%
Laboratory equipment	9 14.5%	36 58.1%	9 14.5%	8 13.0%	62 47%
Computers	5 7.1%	30 42.2%	17 24.0%	19 26.8%	71 54%
Library facility	27 20.5%	65 49.2%	31 23.5%	9 6.8%	132 100%
Tools & Equipment	6 10.4%	25 43.9%	20 35.3%	6 10.4%	57 43%
Campus	35 26.5%	59 44.7%	33 25.0%	5 3.8%	132 100%
Total Responses	98	264	152	72	586
<b>Total %</b>	<b>16.7%</b>	<b>45.1%</b>	<b>25.9%</b>	<b>12.3%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be seen in tables above, that on the whole the students are satisfied with the infrastructure provided in their respective Institutes. A total of 67.7% and 61.8% of the students at the HSS and College respectively have shown they were content with the infrastructure provided to them by ranking it as either Excellent or Good. Where as 23.2% and 25.9% of the HSS and College students respectively have ranked the infrastructure as satisfactory while a minority said it was poor. It was observed that 26.8% of the College students ranked the Computers provided to them as poor.

However, despite the satisfactory response from the HSS students, it was studied during the researcher's personal visit to the institutions and interaction with the students that there is a shortage of some equipments and specially of computers in HSS and Colleges due to which many students have to share one Computer during practicals. In many of the HSS, the lighting too was found to be inadequate in the classrooms.

#### 4.11.2 Opportunity to Use Latest Tools and Equipment:

Just getting first hand practical knowledge and experience in the institution is not sufficient, if the tools and equipments used for the practicals are outdated or obsolete, it would not benefit the students as they would be lost when they enter the world of work where the use of latest tools and equipments are made. Hence students were asked if they get the opportunity to use the latest tools and equipments related to their course. Use of latest tools and equipment enables students to be ready for the world of work keeping them updated with the advancements made by the industry. Students were asked to respond to the question whether they had the opportunity to use latest tools and equipments giving responses of 'Yes' and 'No'. Responses of HSS and College level students are recorded in Table No.4.16 and Table No. 4.17 respectively.

**Table No. 4.16. Opportunity to Use the Latest Tools & Equipments****(HSS Students Responses)**

OPPORTUNITY TO USE LATEST TOOLS & EQUIPMENT			
Course Name	Yes	No	Total
COMP.T	17 70.8%	7 29.2%	24 100.0%
CGDM	30 52.6%	27 47.4%	57 100.0%
CRM	17 53.1%	15 46.9%	32 100.0%
AET	9 50.0%	9 50.0%	18 100.0%
MREEDA	18 47.4%	20 52.6%	38 100.0%
ET	13 56.5%	10 43.5%	23 100.0%
INDUS.M	4 33.3%	8 66.7%	12 100.0%
FCL	2 33.3%	4 66.7%	6 100.0%
HCL	1 20.0%	4 80.0%	5 100.0%
B & C	8 72.7%	3 27.3%	11 100.0%
<b>Total</b>	<b>119</b>	<b>107</b>	<b>226</b>
<b>Total %</b>	<b>52.7%</b>	<b>47.3%</b>	<b>100.0%</b>

\* Source: Primary Survey

**Table No. 4.17. Opportunity to Use the Latest Tools & Equipments****(College Students Responses)**

OPPORTUNITY TO USE LATEST TOOLS & EQUIPMENT			
Course Name	Yes	No	Total
I. CHEM	4 15.4%	22 84.6%	26 100.0%
B.TECH.	10 50.0%	10 50.0%	20 100.0%
COMP. A.	15 83.3%	3 16.7%	18 100.0%
EEM		2 100.0%	2 100.0%
<b>Total</b>	<b>29</b>	<b>37</b>	<b>66</b>
<b>Total %</b>	<b>43.9%</b>	<b>56.1%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be seen from the above two tables that students of the Commerce and Humanities based courses do not use tools and equipments and hence, have not responded to the question. It is viewed in Table No.4.16 that a more or less equal proportion of students at the HSS level claim that they do not have the opportunity to use the latest tools and equipments while others claim to have had the opportunity of using the latest tool and equipments i.e. 52.7% of the students say they had exposure to the latest equipments while 47.3% of the students claim they didn't have that opportunity. In the case of College students, there is a majority of 56.1% of the students who claim that they didn't have the opportunity to use the latest equipments, while 43.9% said they had.

#### 4.11.3 Teacher's Opinion of Infrastructure:

The Teachers opinion was also sought regarding the infrastructure, available in the institution for the courses taught by them. The teaching faculties were asked their opinion if the infrastructure present in the institute was adequate or inadequate. 36 of the HSS and 16 of the College teaching faculties responded that the infrastructure in their institution was inadequate.

#### 4.12 Teaching Faculty:

Vocational courses are to be conducted with the help of full time as well as part time teachers. The full time teachers will be appointed to teach vocational subjects as well as coordinate the general organization of the programme and also coordinate the work of the part time staff in the institution. CSS has recommended one full time and one part time teacher for each course for conducting the course.

Salary for the full- time teachers is as per State Government Scales. While the part- time teachers at the HSS level were paid a consolidated salary of 1000/-

per month. The part –time teachers have all expressed their concern about their very low salaries. This unattractive salary prevents hardworking and skilled teachers to take up teaching assignments. There have been recommendations made by the review committee that part time teachers may be in time scale and allowance on par with regular teachers so that vocational courses can attract experts in the field.

As regards the teaching faculties appointed to teach the vocational subjects at the College level, no separate teaching faculties were to be appointed. The existing teaching faculties teach the vocational subjects as well with an extra remuneration for additional vocational lectures taken by them.

#### 4.12.1 Profile on Teaching Faculty:

The total number of staff exclusively meant for a particular elective cannot be given as it was found to be quite a usual practice that a particular teacher teaches more subjects than one. It was also a common practice that general stream teachers would teach vocational students as well. Despite this limitation, the availability of course wise full time and part time teachers in HSS and Colleges is mentioned below.

#### Teaching Faculties Gender, Age and Nature of Appointment:

Out of the 48 teaching faculty selected for the study, at the HSS level, 25 were males and 23 females. 22 were within the age group of 25 – 35 years while 26 were within the age group of 35 to 50 years of age. 30 of them were appointed on a full-time basis and were permanent, while 16 were full –time but were not made permanent. Just two of those selected were part-time teachers.



At the College level, out of the 20 teaching faculty selected for the study, 11 were males and 8 females. 11 were within the age range of 25 – 35 years while 9 were within the age range of 35 to 50 years of age. 15 of them were appointed on a full-time basis and were permanent, while 3 were full –time but were not made permanent. There was only one part-time teacher of those selected.

Table No.4.18 below gives the details of number of Teaching faculty selected for the study course wise form various HSS and Colleges.

**Table No 4.18 Teaching Faculty selected for the Study (Course wise)**

<i>Course</i>	<i>HSS Teaching Faculty selected</i>	<i>Course</i>	<i>College Teaching Faculty selected</i>
OSS	8	I.CHEM	5
AAT	4		
INS	2	B.TECH.	4
MKT.& S.	1		
COMP. T.	6	COMP.A.	5
CGDM	7		
CRM	4	EEM	1
T&T	1		
AET	4	TRAVEL& T.	1
MREEDA	5		
ET	2	ADVT.& S	4
INDUS. M.	1		
FCL	1		
HCL	1		
B&C	1		
<b>Total</b>	<b>48</b>	<b>Total</b>	<b>20</b>

#### 4.12.2 Teachers Qualification and Work Experience:

At the HSS level, qualifications of full- time teachers vary with reference to each group of vocational course and also depending on the availability of the qualified persons at the salaries that prevail. Generally, a Masters degree is a basic qualification for selection of vocational teachers. In courses for which post graduate teacher is not available such as Technological courses, Degree or

Diploma is the minimum basic qualification prescribed. The selection procedure for full time teachers would be the same as that of regular teachers in other areas.

The part time teachers can be obtained from among professionals in the concerned vocation even though they may not have any formal qualifications. The collaborating institutions will be the main source of supply of part – time teachers. Retired people from different vocations could be also employed on a part – time basis. The head of the vocational institution would have a free hand to appoint part time teachers. The teacher appointed however, will have to be within the guidelines laid down. The honorarium to part time teachers will be suitably determined by the State Government.

Teachers Qualification:

Of the teaching faculty at the HSS level that was selected for the study, 19 had a Post graduation qualification, 18 were only graduates and 11 of those teaching the technical courses were holding a diploma certificate. Besides the degree and diplomas possessed by the teaching faculty in their respective field of specialization, 31 teachers had an added qualification of Bachelors in Education (B.Ed), and two teachers had a Masters degree in Education (M.Ed).

In the case of teaching faculty selected for the study at the College level, 4 were Post Graduates with Ph.D; 2 were Post Graduates with M.Phil, while 14 were just Post Graduates. Of these, just one teaching Faculty had an additional qualification of B.Ed and one had the M.Ed. degree.

### Teaching & Industrial work experience:

Of the teaching faculty at the HSS level, 22 teachers had a teaching experience ranging between 2 to 10 years while 26 had a teaching experience of 11 to 17 years. Of these, 28 were found to be teaching academic subjects along side vocational. Amongst the teaching faculty selected, just five of the teaching faculties were found to have previous industrial experience before joining as teachers for the vocational course. Their years of experience at the industry ranged between 1 to 5 years.

Amongst the teaching faculty at the College level, 11 teachers had a teaching experience ranging between 2 to 10 years while 9 had a teaching experience of 11 to 17 years. Of these, all eleven were found to be teaching academic subjects along side vocational. Amongst the teaching faculty selected, just two of the teaching faculties were found to have previous industrial experience before joining as teachers for the vocational course. Their years of experience at the industry ranged between 1 to 3 years.

### 4.12.3 Teachers Training:

In order to enable a HSS teachers to teach the vocational course efficiently, training programmes for all vocational teachers would be organized. Pre – service programmes for fresh entrants, training programmes and periodic refresher courses for in – service teachers and training programmes for part – time teachers on a regular basis would be a regular feature in order to meet the requirements of the vocational teacher. The states are expected to work out their requirements vocation wise and on the basis of this data, the NCERT will identify the institutions and chalk out a suitable training programme of three to four weeks depending on the requirements of the teachers.

In the case of training for vocational teachers at the College level, refresher courses were organized. There was no special training given to the teaching faculty of the vocational subjects in colleges.

The teaching faculties were asked if they underwent any kind of special training programmes to teach the vocational course more efficiently. It was found that many of the older and experienced teaching faculties teaching the vocational courses at the HSS level, had undergone some kind of training either before teaching the vocational course or during the course.

At the College level however, no special training was expected to be undergone by the faculties teaching the vocational subjects. However, some of the Teaching faculties teaching the science based vocational subjects expressed their interest in undergoing some kind of industrial training as it would enable them to be more resourceful.

#### **Students Opinion on the Teaching Faculty:**

In order to evaluate the credibility of the teaching faculties teaching the vocational courses, students at the HSS and College level were asked their opinion on the teaching faculty for the various courses.

#### **4.12.4. HSS Students Opinion of Teaching Faculty (Course wise):**

An attempt was made in knowing how the students judge the teachers teaching them. The students were asked to rank the teaching faculty teaching them the vocational theory and vocational practical subjects separately. Ranks of Excellent, Good, Satisfactory and Poor were given by the students to the teaching faculty teaching them the respective course papers. Students ranked the teaching faculty based on the teacher's subject knowledge and ability to

teach the course well. Table No.4.19 and Table No. 4.20 below, shows the student's opinion of the teaching faculties for the vocational theory and vocational practical subjects of various courses.

**Table No.4.19 HSS Student's Opinion on Teaching Faculty for Vocational Theory Subject**

STUDENTS OPINION OF TEACHING FACULTY FOR VOCATIONAL THEORY					
Course Name	Excellent	Good	Satisfactory	Poor	Total
OSS		10 13.0%	23 29.9%	44 57.1%	77 100.0%
AAT		3 6.8%	11 25.0%	30 68.2%	44 100.0%
INS			7 36.8%	12 63.2%	19 100.0%
MKT. & S			4 26.7%	11 73.3%	15 100.0%
COMP.T		6 19.4%	9 29.0%	16 51.6%	31 100.0%
CGDM		7 11.7%	19 31.7%	34 56.7%	60 100.0%
CRM		2 5.9%	19 55.9%	13 38.2%	34 100.0%
T & T.			8 53.3%	7 46.7%	15 100.0%
AET		4 21.1%		15 78.9%	19 100.0%
MREEDA	1 2.6%	7 18.4%	6 15.8%	24 63.2%	38 100.0%
ET		3 13.0%	7 30.4%	13 56.5%	23 100.0%
INDUS.M		1 8.3%	4 33.3%	7 58.3%	12 100.0%
FCL		2 20.0%	7 70.0%	1 10.0%	10 100.0%
HCL		7 70.0%	1 10.0%	2 20.0%	10 100.0%
B & C		1 9.1%	5 45.5%	5 45.5%	11 100.0%
Total	1	53	130	234	418
Total %	0.2%	12.7%	31.1%	56.0%	100.0%

\* Source: Primary Survey

**Table No.4.20 HSS Student's Opinion of Teaching Faculty for Vocational Practicals**

STUDENTS OPINION OF TEACHING FACULTY FOR VOCATIONAL PRACTICALS					
Course Name	Excellent	Good	Satisfactory	Poor	Total
OSS		15 19.5%	18 23.4%	44 57.1%	77 100.0%
AAT		4 9.1%	13 29.5%	27 61.4%	44 100.0%
INS			7 36.8%	12 63.2%	19 100.0%
MKT. & S	1 6.7%	1 6.7%	3 20.0%	10 66.7%	15 100.0%
COMP.T		7 22.6%	4 12.9%	20 64.5%	31 100.0%
CGDM		3 0.05	9 0.15	48 0.8	60 1
CRM		3 8.8%	13 38.2%	18 52.9%	34 100.0%
T & T.			11 73.3%	4 26.7%	15 100.0%
AET			5 26.3%	14 73.7%	19 100.0%
MREEDA	3 7.9%	6 15.8%	4 10.5%	25 65.8%	38 100.0%
ET	1 4.3%		14 60.9%	8 34.8%	23 100.0%
INDUS.M	1 8.3%	5 41.7%	3 25.0%	3 25.0%	12 100.0%
FCL		3 30.0%	3 30.0%	4 40.0%	10 100.0%
HCL		1 10.0%	6 60.0%	3 30.0%	10 100.0%
B & C			3 27.3%	8 72.7%	11 100.0%
<b>Total</b>	<b>6</b>	<b>48</b>	<b>116</b>	<b>248</b>	<b>418</b>
<b>Total %</b>	<b>1.4%</b>	<b>11.5%</b>	<b>27.8%</b>	<b>59.3%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be spotted out in the tables above that, a majority of the HSS students i.e. 56% and 59.3% claimed that they were not satisfied with the teaching faculty for the vocational theory subject and vocational practical subjects respectively. Excellent is a rank that is most sparingly given by a handful of the students to their teaching faculty.

#### 4.12.5 College Students Opinion of Teaching Faculty (Course wise):

In a similar fashion as in the case of HSS, College students were also asked their opinion regarding the teaching faculty teaching them. They too ranked the teaching faculty teaching them the vocational theory and practicals separately giving ranks of Excellent, Good, Satisfactory and Poor. Table No.4.21 and Table No.4.22 below gives the College students opinion on the teaching faculty teaching them the vocational theory and vocational practical subject respectively.

**Table No.4.21 College Students Opinion on Teaching Faculty for Vocational Theory Subject**

STUDENTS OPINION OF TEACHING FACULTY FOR VOCATIONAL THEORY				
Course Name	Excellent	Good	Satisfactory	Total
I. CHEM	12 44.4%	13 48.1%	2 7.4%	27 100.0%
B.TECH.	3 15.0%	16 80.0%	1 5.0%	20 100.0%
COMP. A.	3 10.7%	15 53.6%	10 35.7%	28 100.0%
EEM		1 50.0%	1 50.0%	2 100.0%
T & T	3 15.8%	9 47.4%	7 36.8%	19 100.0%
ADVT. & S.	10 30.6%	13 36.9%	13 32.5%	36 100.0%
Total	31	67	34	132
Total %	23.5%	50.8%	25.8%	100.0%

\* Source: Primary Survey

It was observed from Table No.4.21 above and from Table No.4.22 given below that quite unlike the responses given by the HSS students towards their teaching faculty, a majority of the College vocational students seemed satisfied with the teaching faculty teaching the vocational theory as well as the practicals, as most students have ranked them either as Excellent or Good. In Table

No.4.22 it can be observed that the Travel and tourism course doesn't appear in the table. That is because the students have not responded to the question as they claimed that were not provided any practical training.

**Table No.4.22 College Students Opinion on Teaching Faculty for Vocational Practicals**

STUDENTS OPINION OF TEACHING FACULTY FOR VOCATIONAL PRACTICALS					
Course Name	Excellent	Good	Satisfactory	Poor	Total
I. CHEM	9 33.3%	15 55.6%	3 11.1%		27 100.0%
B.TECH.	1 5.0%	13 65.0%	4 20.0%	2 10.0%	20 100.0%
COMP. A.	3 12.0%	12 48.0%	8 32.0%	2 8.0%	25 100.0%
EEM		2 100.0%			2 100.0%
ADVT. & S.	4 100.0%				4 100.0%
Total	17	42	15	4	78
Total %	21.8%	53.8%	19.2%	5.1%	100.0%

\* Source: Primary Survey

#### 4.12.6 Teachers Opinion of Students (Course wise):

An attempt was made to find out the students interest in the vocational course opted by them. Hence, the opinion of the teaching faculty teaching the students was sought. HSS as well as College teachers were asked to rank the vocational students taught by them for the respective courses. The teaching faculty ranked the students based on their personal teaching experience with the students and also keeping in mind the students interest and performance in the vocational course. The teaching faculty ranked the students with ranks of Excellent, Good, Satisfactory or Poor. Table No.4.23 and Table No.4.24 shows the opinion given by HSS and College level teachers respectively, towards the students taught by them.



**Table No. 4.23 HSS Teachers Opinion on Students Attitude Towards the Course**

<b>TEACHERS OPINION OF STUDENT TOWARDS THE COURSE</b>				
<b>Course Name</b>	<b>Excellent</b>	<b>Good</b>	<b>Satisfactory</b>	<b>Total</b>
OSS	3 37.5%	4 50.0%	1 12.5%	8 100.0%
AAT	2 50.0%	2 50.0%	0 0.0%	4 100.0%
INS	0 0.0%	2 100.0%	0 0.0%	2 100.0%
MKT. & S	1 100.0%	0 0.0%	0 0.0%	1 100.0%
COMP.T	4 66.7%	2 33.3%	0 0.0%	6 100.0%
CGDM	1 14.3%	6 85.7%	0 0.0%	7 100.0%
CRM	4 100.0%	0 0.0%	0 0.0%	4 100.0%
T & T.	0 0.0%	1 100.0%	0 0.0%	1 100.0%
AET	2 50.0%	2 50.0%	0 0.0%	4 100.0%
MREEDA	1 20.0%	3 60.0%	1 20.0%	5 100.0%
ET	1 50.0%	1 50.0%	0 0.0%	2 100.0%
INDUS.M	1 100.0%	0 0.0%	0 0.0%	1 100.0%
FCL	0 0.0%	1 100.0%	0 0.0%	1 100.0%
HCL	0 0.0%	1 100.0%	0 0.0%	1 100.0%
B & C	0 0.0%	1 100.0%	0 0.0%	1 100.0%
<b>Total</b>	<b>20</b>	<b>26</b>	<b>2</b>	<b>48</b>
<b>Total %</b>	<b>41.7%</b>	<b>54.2%</b>	<b>4.2%</b>	<b>100.0%</b>

\* Source: Primary Survey

**Table 4.24 College Teachers Opinion on Students Attitude Towards the Course**

TEACHERS OPINION OF STUDENT TOWARDS THE COURSE					
Course Name	Excellent	Good	Satisfactory	Poor	Total
I. CHEM	2 40.0%	2 40.0%	1 20.0%		5 100.0%
B.TECH.		4 100.0%			4 100.0%
COMP. A.		2 40.0%	2 40.0%	1 20.0%	5 100.0%
T & T		1 100.0%			1 100.0%
ADVT. & S.	2 50.0%		2 50.0%		4 100.0%
EDS	1 100.0%				1 100.0%
<b>Total</b>	<b>5</b>	<b>9</b>	<b>5</b>	<b>1</b>	<b>20</b>
<b>Total %</b>	<b>25.0%</b>	<b>45.0%</b>	<b>25.0%</b>	<b>5.0%</b>	<b>100.0%</b>

\* Source: Primary Survey

It can be noted from the above two tables that majority of the teaching faculties of HSS as well as Colleges have ranked the vocational students as good. This speaks of the positively of the interest level of the students towards the vocational course. None of the teachers at the HSS level had ranked their students as poor, while only 4.2% had ranked them as Satisfactory. Hence, it can be said that most of the vocational students both at the HSS and College level show take up vocational courses with interest.

**Conclusion:**

This chapter reviews the status of vocational education at the HSS and College level in terms of its infrastructure, curriculum and its teaching faculty for the vocational theory and practical subjects. It has been observed that on the whole the vocational students are satisfied with their course curriculum of the course studied by them, and also with the infrastructure provided by the institution. However the students at the HSS level were found to show dissatisfaction towards the faculty teaching the vocational theory and practical

subjects. It was also observed that the institutions have very few industrially experienced faculties teaching them. In order to be able to teach the course effectively, there is need for the right kind of experienced teaching faculty.

Hence we can conclude in this chapter that the sixth hypothesis, '*lack of required infrastructure, shortage of suitable teaching faculty and no timely revision of curriculum are responsible to reduce the quality of the course*' is partially true. This hypothesis involves three variables, and hence all three had to be considered individually.

As regards infrastructure, majority of the students at the HSS and College level have shown satisfaction towards the infrastructure present in their institution. But however, nearly half of the total student strength claims that they do not have the opportunity to use the latest tools and equipments relevant to their course. This shows that as per the students response, the institutes have adequate infrastructure but they lack up to date equipments. Majority of the teaching faculties at the HSS and College level, were also of the opinion that the infrastructure available in the institute was inadequate. This suggests that the required infrastructure necessary for the course is not available in most institutions. Hence it can be concluded that this part of the hypothesis true.

Taking the second part of the hypothesis into consideration, i.e. the teaching faculty, it was observed from the profile of the teaching faculties, that the teaching faculties at the HSS and College level possess good educational qualification. But in order to teach the vocational course effectively, the suitable teaching faculty would be those who not only have the required educational qualification, but also have industrial work experience. Industrially experienced Teaching faculty would be more effective teachers for the vocational students.

But we have observed that there are very few industrially experienced teaching faculties teaching the students. Hence, again we can conclude that there is a shortage of suitable teaching faculties teaching the vocational students.

As far as timely revision of curriculum is concerned, it was observed that the HSS curriculum had been revised and majority of students show satisfaction with the curriculum but the curriculum for the vocational subjects at the College level had not been revised. However, industrialists and educationalists were of the opinion that the vocational curriculum at the HSS and College level needs further revision in order to meet to the requirements of the present industry. The curriculum requires to be revised regularly. Hence this hypothesis is also partially true.

It can be hence concluded saying that, according to the findings of the study, to some extent, the said hypothesis is true.