

IAMR Report No.8/2000

**AN EVALUATION OF VOCATIONAL
EDUCATION SCHEME
OF
UGC**

Sponsored by

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PREFACE

The Study on Evaluation of Vocational Education at the graduate level was undertaken by the IAMR at the instance of the Planning Commission during the year 2000. The study was conducted to evaluate the performance of the students and point out the shortcomings of the courses at the vocational education level. The study was conducted at the graduate level in 16 colleges from four different universities in four States.

The main objective of the study is to review the existing courses based on the employability of the graduates and to examine the process of implementation of the Vocational Stream vis-à-vis the UGC guide lines. The Study suggests ways and means to increase the employability of girl students, and to make the courses more suitable to local needs and conditions.

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We acknowledge with thanks the co-operation we received from Vice-Chancellors, Registrars and Deans of the four universities and Principals of the respective colleges for their support and co-operation. We are thankful to all the local investigators we had employed at different places.

The questionnaires were developed and canvassed and the field work at the selected universities was undertaken by a study team consisting of Dr. Anil K. Yadav, Chief, Shri V.K. Berry, Research Officer and Shri Jerry Joseph, Research Associate.

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H. Ramachandran
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Chapter I

Introduction

It has been observed over a period of time that the incidence of unemployment and under-employment amongst university graduates is increasing. The Live Register of Employment Exchanges indicated that the increase in the number of persons seeking employment assistance had been higher in case of educated than the unskilled workers in general. Due to the oversupply of the graduates, competition for the jobs earlier performed by less qualified persons grew. In particular, employment possibilities of graduates and post-graduates of general subjects were becoming increasingly limited. Similarly, the education imparted did not match the requirements of the labour market. The kind of education offered also was not oriented to employment. Educational institutions were not equipped to visualise precisely, and provide for, training in required traits. Moreover, skill requirements of occupations changed continually in response to technological changes.

Attempts to restructure the Indian education have been made from time to time. One such attempt was to introduce the vocational education at the senior secondary level. The main focus of this type of education was to convert the senior secondary into the terminal stage of education. Unfortunately, the objectives of vocationalisation of secondary education could not be realised. Several factors contributed to the failure, which included the mismatch between skills training and knowledge imparted and required for the available jobs. Secondly, the supply of manpower was much in surplus

of the possible demand. In this situation the pass-outs of the secondary level education tended to flock to colleges and universities. This trend had been putting tremendous pressure on the universities' and colleges' material and manpower resources. But the colleges and universities were unable to absorb these students appropriately.

This prompted the University Grants Commission to initiate a number of programmes related to career oriented knowledge and skills during the Fifth Five Year Plan and in early eighties. The National Policy on Education (NPE), 1986 (revised in 1992) of the Ministry of Human Resource Development, Government of India, and subsequent Programme of Action 1992 (drawn from NPE) also emphasised the need of exposing the university and college students to the application-oriented courses.

Later, to review the scenario at the first-degree level and to make suitable recommendations, the University Grants Commission constituted a Core Committee under the Chairmanship of Dr. T.N. Dhar. The Committee proposed that the basic structure of the present three-year degree course should remain the same and along with that, a student should also select at least one vocational subject.

On the basis of the recommendations made by the Dhar Committee, University Grants Commission (UGC) launched the scheme of vocational education in the academic session of 1994-95. The different aims of the scheme pertained to – preparation of graduates for employment, filling up of intermediate job positions arising due to the new economic policy, assurance of adequate supply of skilled persons for non-formal demands, development of capabilities of students with support from financial and other

institutions to set up their own small enterprises, provision and assurance of vertical mobility in addition to the horizontal employability after graduation and provide employment in the rural and agro-based sectors. Increasing employability in rural areas was intended to act as a check on the rural urban migration, and finally vocational education was intended to provide education to women corresponding to market needs.

This curriculum of vocational education was introduced as a part of undergraduate courses of Arts, Science, Commerce, Engineering & Technology. The curriculum of vocational education included the following disciplines at the first degree level:

ARTS, HUMANITIES AND SOCIAL SCIENCES

1. Functional Hindi
2. Functional Sanskrit
3. Communicative English
4. Archaeology & Museology

COMMERCE AND ECONOMICS

1. Principles & Practices of Insurance
2. Actuarial Science
3. Office Management & Secretarial Practice
4. Tax Procedures & Practices
5. Foreign Trade Practices & Procedures
6. Tourism and Travel Management
7. Advertising, Sales Promotion & Sales Management
8. Computer Applications

SCIENCES

1. Industrial Chemistry (Seven streams)
2. Food Science & Quality Control
3. Clinical Nutrition Dietetics
4. Industrial Microbiology
5. Bio-technology
6. Biological Technique & Specimen Preparation
7. Seed Technology
8. Sericulture
9. Industrial Fish & Fishery
10. Instrumentation
11. Optical Instrumentation
12. Geo-exploration & Drilling Technology
13. Mass Communication Video Production
14. Still Photography Audio Products

ENGINEERING & TECHNOLOGY

1. Electronic Equipment Maintenance
2. Computer Maintenance
3. Electrical Equipment Maintenance
4. Environment & Water Management
5. Rural Technology

6. Automobiles Maintenance
7. Refrigeration & AC Maintenance
8. Construction Technology & Management
9. Manufacturing Process

At present this scheme is being implemented in 100 Universities covering 1317 colleges. The combination of subjects for the vocational courses as proposed by UGC is presented in Annexure-I.

Keeping in view the above facts, and also to expand the coverage, UGC is looking towards the Planning Commission to raise the Ninth Plan outlay for Vocational Education. It also wishes that the Eighth Plan expenditure be converted into non-plan expenditure. In order to examine the performance of the scheme of vocational education, the Planning Commission wished that IAMR undertake an in-depth analysis of the vocational education scheme of the UGC and its impact at the undergraduate level. Hence the following study was undertaken.

2. Issues in Vocational Education

There are a large number of issues involved with this vocationalisation scheme.

These relate to questions like:

- How far are the syllabus and infrastructure facilities adequate?
- What is the mode of implementation of this course?
- Whether it is suitable to the local conditions?
- Whether a continuous upgradation of course contents is done?

- Whether the reading materials are easily accessible and available on time?
- Whether the faculty members are available?
- How far the course meets the popular needs and aspirations?
- How are the pass-outs engaged?
- What are the eligibility criteria for admissions in vocational courses?

1. Objectives of the Study

1. To review the existing courses based on the employability of the pass-outs
2. To analyse the socio-economic background of women.
3. To assess the performance and employability of pass-out students.
4. To review the structure of the courses.
5. To examine the process of implementation of the course at college level.

2. Scope of the Study:

The study covers the courses within the four thrust areas of Arts, Science, Commerce, and Engineering & Technology through a Primary survey. It spans across the following Four Universities;

1. Gujarat University, Ahmedabad
2. Karnataka University, Dharwad
3. Devi Ahilya University, Indore
4. Madurai Kamaraj University, Madurai

Further, it also covers 16 colleges affiliated to the above universities where vocational education has been introduced by UGC during 1994-95 to 1998-99.

University-wise names of the colleges are given in the table below.

**University-wise Names of Vocational Colleges and
Subjects taught at Graduate Level**

Sl.No	University	Vocational Colleges Covered	Vocational Subject taught	Vocational Scheme
1.	Gujarat University, Ahmedabad	1. M.G. Science Institute 2. L.D. Arts College 3. L.J. Commerce College 4. Vivekanand Arts College	Bio-Technology, Advertising, Sales Promotion & Management, Computer Application, Computer Application	Sciences Commerce & Economics -do- -do-
2.	Devi Ahilya University, Indore	1. Islamia Karima College 2. M.K.H.S. Gujarat Gents College 3. Govt. Sanskrit College 4. Shai Vashnava College of Commerce	Electronic Equipments Maintenance, Computer Maintenance, Tax Procedures & Practices, Functional Sanskrit Computer Application	Engineering & Technology Commerce & Economics Arts Humanities & Social Sciences Commerce & Economics
3.	Madurai Kamaraj University, Madurai	1. Saraswati Narayanan College 2. Fatima College	Industrial Chemistry Office Management & Secretarial	Sciences Commerce & Economics

		3. Sree Meenakshi Govt. College 4. Yadava College	Practice Communicative English Computer Application	Arts Humanities & Social Sciences Commerce & Economics
4.	Karnataka University, Dharwad	1. Karnataka Arts College 2. Shri Mrityunjaya College of Arts & Commerce 3. Karnataka Science College 4. J.S.S. Banashankari Arts & Commerce & S.K. Gubbi Science College	Functional English & Functional Hindi, Computer Application Industrial Fish & Fishery Computer Application Sericulture	Arts Humanities & Social Science Commerce & Economics Sciences Commerce & Economics, Sciences

Methodology:

There are 100 universities (1317 colleges) at present imparting vocational education to students. As already mentioned, under four main streams viz., Arts-Humanities, Commerce & Economics, Science, and Engineering & Technology the different vocational courses are offered. As proposed, sixteen colleges were chosen from institutions providing vocational education from four selected universities. That is, from each university we have chosen four colleges where vocational courses are run. Efforts have been made to cover as many disciplines pertaining to the four main streams in which vocational education is being imparted by the colleges as possible. There have

been detailed investigation through a checklist into various aspects in these colleges and institutes such as:

- Norms and Standards applied for (i) selection of students for the Vocational Education Programme (ii) for evaluation and promotion of students and (iii) suggestions thereof. Criteria for (i) selection of faculty for the course; and for the quality improvement and upgradation programmes; (ii) usefulness of quality improvement and upgradation programmes; (iii) relevance and usefulness of course and subjects being taught to the students in the context of present day demands in the job market; and (iv) suggestions in each of the above issues;
- Availability of necessary and advanced infrastructural facilities to run the programme, both for theoretical inputs and practical training; types of improvements already made, in pipeline and required to be made for successful running of the programme.

The total number of students, pass-outs and currently undergoing education from each college, have been compiled in chronological order and information from the selected students gathered so as to assess the usefulness of the scheme. A representative sample of the students was also taken and assessment of the scheme was made on the basis of the following criteria through a structured questionnaire:

- Employment opportunities after completing the course
- Performance of the students after the course
- Popularity of the course among students (needs & aspirations).

An open-ended discussion had been carried out with Heads of concerning colleges & institutions running the courses. These discussions had also been held in the

light on changing economic scenario due to globalisation and economic progress and its likely implications on future employment aspects of students.

Chapter Scheme

Apart from this introductory Chapter, five more Chapters have been included in this report. Although all chapters look at the vocational education in totality, some specific thrusts have been given to each chapter. In chapter two, the basic objective of the courses and the views expressed by students undergoing vocational education has been dealt with. In the third Chapter, the process of implementation at the college level, the availability of trained teachers, limitation in infrastructure etc, and the views expressed by the heads of the institutions is included. In the fourth chapter, employability of the pass-outs of vocational courses has been dealt with. In the fifth chapter, ways to increase the employability of the pass-outs taking into account the local needs, employability of girl students and the demands of the labour market according to the vast changes everywhere has been dealt with. Finally, the findings and conclusions have been included in the sixth chapter.

Chapter-II

Objectives and Status of the Vocational Courses

Over the years the University system has done precious little to increase the employability of the students. Some of the students who passed out of the Universities could find bank, clerical and office jobs etc. It has been observed that generally the degree level study was most un-focused. This in turn was not helping students to develop their critical perspective, commitment to a certain discipline neither an orientation aimed at contributing something in the future nor enable them in attaining a job. So a need was felt to re-orient the student community to develop capabilities required for self-employment. This was particularly so because of the limited absorptive capacity of the organised sector and the withdrawal of the state from the position of provider of jobs since the beginning of liberalisation in the late 80s. The need for re-orientation had become utmost important after 1991. New job opportunities and diversification of the informal sector since liberalisation put further pressure on the student community for entry into gainful employment, particularly self-employment. This was the reason for introducing vocational education from the year 1994-95 at the under-graduate level.

The basic purpose of the vocational courses introduced in 1994-95 was to develop capabilities of the students required for self-employment. This was done while keeping in view the vast changes that have occurred in the economy ever since liberalisation. This has also been done to address the problems faced by students who passed out the conventional degree courses. The conventional degree courses had to include one subject aimed at increasing the employability of the students. This has been done while keeping

in view the revolution in information technology, computer applications, new modes of communications, giant leaps in electronic and scientific fields, new business practices and development of bio-technology and agro-processing. While introducing the courses, the university authorities were expected to look into local conditions and needs and to improve the employability of girl students also. Altogether there are 35 subjects in four different streams in the vocational curriculum. The four streams are:

1. Arts, Humanities & Social Sciences
2. Commerce & Economics
3. Sciences
4. Engineering & Technology

Among the 35 subjects, the study team was able to cover 14 subjects in four universities. The subjects covered by the study team within the above streams are:

1. Arts, Humanities & Social Sciences

1. Functional Hindi
2. Functional Sanskrit
3. Communicative English (also known as Functional English)

2. Commerce & Economics

1. Principles and Practices of Insurance
2. Office Management & Secretarial Practices
3. Tax Procedures & Practices
4. Advertising, Sales Promotion & Sales Management
5. Computer Applications

3. Sciences

1. Industrial Chemistry
2. Bio technology
3. Sericulture
4. Industrial Fish & Fishery

4. Engineering & Technology

1. Electronic Equipment Maintenance
2. Computer Maintenance.

The study team visited four universities in four different states and carried out extensive survey among (i) The Heads of the Institutions; (ii) Teachers; (iii) Students; (iv) Pass-outs and (v) Experts with the help of university and college authorities and by appointing local investigators in each area to interview the pass-outs. The four universities covered in the study are:

- (i) Gujarat University, Ahmedabad
- (ii) Karnataka University, Dharwad
- (iii) Devi Ahilya University, Indore
- (iv) Madurai Kamraj University, Madurai

Among the existing courses, sex-wise, majority are male students (56.34 percent). This does not mean that girl students are lagging far behind the boys. In fact vocational courses have been introduced in women's colleges and the girl students are pursuing the courses in fair numbers. In fact the study team found two colleges in Madurai Kamraj University, viz. Fathima and Meenakshi College which were meant only for girls. Secondly, age-wise composition was studied and found that majority of the students fall within the age category of 18-20 and only some are 21 years old (See Table 2.1).

Table 2.1: Distribution of Students Undergoing Vocational Education by sex and age in each vocational subject

Vocational Subject	Less than 18 years		18-20 years		20 +		All Ages		Grand Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Functional Hindi				5	5	8	5	13	18
Functional Sanskrit			7				7		7
Communicative English		1		55	5	7	5	63	68
Principles & Practices of Insurance		2	1	1	2	2	3	1	4
Office Management & Secretarial Practice		10	53	3	2	12	55	7	62
Tax Procedures & Practices	1		13	20	29	18	43	42	85
Advertising, Sales Promotion & Management	1		10	32	17	23	28	50	78
Computer Application	1		76	36	32		109	59	168
Industrial Chemistry			44		3	9	47		47
Bio-Technology		1	5	18	2	3	7	28	35
Sericulture					2		2	3	5
Industrial Fish & Fishery			9	5	10		19	5	24
Electronic Equipment Maintenance		1	4		5		9	1	10
Computer Maintenance			6		6		12		12
Total	3	15	228	175	120	82	351	272	623
Percentage	0.48	2.41	36.60	28.09	19.26	13.16	56.34	43.66	100.00

Since the basic purpose of the proposed courses is to prepare university graduates for employment, it was observed that majority of the students we covered echoed the same sentiment when the study team asked them about their motivational aspect. In fact 64.67 percent said that it was job prospects which motivated them to join the vocational course while 27.49 percent said that they wanted to acquire skills needed for self-employment. Some students wished to join family enterprises while others indicated motives like philanthropy, time passage etc. Some students expressed one or more options but insisted that it was prospect for job which primarily guided them while opting for vocational courses. Since more than ninety-six percent of the students undergoing some vocational course indicated in our survey that they wanted to work either in some organisation, or start their own enterprises or to contribute to the family enterprises, it could be conferred that the basic purpose of the course has been fulfilled as it is preparing students for employment (See Table 2.2)

Table 2.2 : Distribution of Students Undergoing Vocational Course according to motivational aspects.

Motivational Aspects	Job Prospects	For acquiring skills needed for self employment	For participating in family enterprise	Any other	Grand Total
Total Numbers of Students	454	193	31	24	702
Percentage	64.67	22.49	4.42	3.42	100.00

Most of the students were hopeful about getting jobs. In fact around seventy five percent of the students we surveyed said that they would be able to get a job at the end of the vocational course (Table 2.3). In some subjects like Computer Applications, Industrial Chemistry and Computer Maintenance the vast majority of the students were hopeful about getting jobs.

Table 2.3 : Distribution of Students according to their views about getting jobs after persuing the vocational course.

	Whether able to get job		Grand Total
	Yes	No	
Total	463	160	623
Percentage	74.32	25.68	100.00

Regarding the nature of organisations where students would like to work, we found that the general perception among the candidates looking for employment still holds. Although government jobs and public sector jobs are shrinking as a result of liberalisation and also at the same time the state is moving away from the role of the provider of jobs, still the vast majority of the students interviewed rate government jobs as their first priority. Around 60 percent of the students cited government jobs in terms of job expectancy and only less than 25 percent opted for private jobs. This may be because the bargaining power is too low in the Indian Private Sector Enterprises and many social security measures found in government jobs are not functional there. Very few students opted for jobs elsewhere like family enterprise or autonomous institutions. Some students were not particular about where they got jobs. Their priority was simply

getting a job (See Table 2.4). This means that the students were not aware about the actual purpose of the vocational education scheme. It is likely that the teachers who were engaged in these vocations also have not told the students about the changing environment. Moreover, some students were of the opinion that the vocational scheme would help them for their vertical mobility.

Table 2.4 : Job expectations / preferences of students undergoing vocational course by nature of organizations.

Nature of Organization	Government	Private	Autonomous	Self or Family	Any Other	Grand Total
Total	387	162	47	45	18	659
Percentage	58.73	24.58	7.13	6.83	2.23	100.00

Vast majority of students who do not expect to get jobs cited reasons such as inadequate training and lack of practical experience as the main obstacles for not expecting a job. In fact, around 40% percent students cited lack of practical experience while undergoing vocational education. Our experiences in the field also confirmed this. In subjects like Communicative English students wanted more practical classes to improve their pronunciation. For Industrial Chemistry course, both students and teachers said that practical training is quite negligible. More linkages with industries, experience in large industries and industrial visits are needed. For the vocational subject, Tax procedures and practices also students demanded practical training by Chartered Accountants and Company Secretaries along with the course. Shortcomings of various other courses can also be cited like this. Lack of campus recruitment and problems in framing the syllabus were also cited by students as reasons for not expecting job (See

Table 2.5). But the vast majority of students we surveyed said that the course is useful in the long run.. In fact more than 80% percent found the course quite useful.

Table 2.5 : The Reasons Cited by Students for not Expecting a Job

Reasons Cited	Inadequate Training	Lack of Practical Experience	No Campus Recruitment	Any Other	Grand Total
Total	54	86	38	36	214
Percentage	25.53	40.19	17.76	16.82	100.00

A large number of the students undergoing vocational education at the undergraduate level indicated that improvement is required in the present course structure. More than eighty-eight percent of students desired for improvements. Many students cited lack of practical experience for not expecting jobs, 37 percent students desired for more practical classes. Around 26 percent desired more Library/Laboratory facilities while 23 percent desired apprenticeship after the course. In fact more practical classes, improvements in Library/Laboratory facilities and apprenticeship after the course were the often-cited improvements desired for the vocational courses (See Table 2.6).

Table 2.6 : Distribution of Students indicating nature of improvements desirable in the Vocational Courses.

Nature of Improvement	More Theory Classes	More Practical Classes	Improvements in Library/Laboratory Facilities	Apprenticeship after the course	Any Other	Grand Total
Total	84	313	223	196	34	850
Percentage	9.88	36.82	26.24	23.06	4.00	100.00

Expressing similar sentiments as cited above students desired for more infrastructural facilities. Apart from the opinions expressed for additional study materials, library and laboratory facilities, more audio-visual aids were desired by lot of students. Students undergoing some specific courses like Communicative English desired for audio-visual aids. In fact, our field experiences also suggest that audio visual aids is quite useful in language courses as it helps both teachers and the students. It improves the pronunciation of students and helps the teachers to specifically look into the problems of each student without the other students noticing that. So the particular student will not get a sense of inferiority and the whole exercise can be conducted very smoothly.

Students also suggested improvements in specific subjects. This was indicated for newly emerging areas like Computer Applications, Industrial Chemistry, Bio-technology etc. Students have cited specific subjects also which they felt should be introduced in the present course structure.

So far as opinion regarding teachers is concerned, majority of the students (75 percent) observed that teachers are well equipped to impart skills needed for the concerned vocational subject. On the other hand, around 25 percent cited many problems relating to the teaching faculty. Teachers not possessing the requisite knowledge and the non availability of qualified teachers were the often-cited complaints against the teachers by students (See Table 2.7 & 2.8). As vocational subjects were new compared to the conventional subjects, many teachers are unaware of new pattern in the syllabus

according to which they have to conduct classes. In addition, it was observed, in many instances teachers do not know how to give practical training to the students.

Table 2.7: Distribution of Students according to views on ability of Teachers to impart skill formation among Vocational Students.

	Whether Teaching Faculty is well Equipped to impart skill		Grand Total
	Yes	No	
Total	475	148	623
Percentage	76.24	23.76	100.00

Table 2.8 : Distribution of Students according to views on nature of shortcomings of the Teaching faculty

Nature of Shortcomings of Teaching Faculty	Absence of Teachers	Teachers lacking requisite knowledge	Teachers not willing to take classes	Non availability of qualified teachers	Any Other	Grand Total
Total	24	51	14	64	17	170
Percentage	14.12	30.00	8.24	37.65	10.00	100.00

Yet another prime objective of vocational education is to increase employability of students suited to local needs and conditions. The universities are given the power to modify the courses accordingly. As the students have to be locally employed, they must be given enough training to increase their employability at the local level itself. Teachers must also be aware of the local needs and aspirations. During the course of our survey we seldom found that this criterion is met either while framing vocational courses at the university level or at the implementation level by colleges and teachers. Large number of students (more than 58 percent) remarked that vocational courses are of no use to

local needs and conditions. The course contents do not relate to local conditions and needs. Many students expressed the need for field experience, imparting knowledge about local needs, knowledge on local resources and their commercial use and training in modernising local industries (See Table 2.9).

Table 2.9 : Distribution of Students according to suggestions regarding improvements in the course content for meeting local conditions and needs

Nature of Improvements	Field Experience	Imparting knowledge about local needs	Knowledge of local resources and their commercial use	Training in modernisation of local industries	Any other	Grand Total
Total	142	63	134	193	13	545
Percentage	26.06	11.56	24.59	35.41	2.39	100.00

Increasing the employability of girl students is another major objective of vocational education. During our survey, the study team could observe that constraints faced by girl students varied according to regions. For example, in Madurai (Tamil Nadu) many teachers cited early marriage of girls as a major handicap in completing the course. Many girls get married while studying for the course itself. In Dharwad (Karnataka), it is observed that girl students prefer to finish the course, although early marriage is also the norm. But in both places, employability of the girl students was very dismal.

Overall, while the vocational courses have evoked an yearning for job among the students, it has failed to achieve many important objectives as perceived by the planners

and policy makers while framing and introducing these courses at the university level. It has failed to detract students' aspiration for a government job only and promote self-employment. Lack of infrastructure and absence of trained teachers act as a major handicap for the courses. Absence of link-up with industries, campus recruitment etc., actually curtail the job prospects of students. One of the major objective, namely, increasing the employability of the girl students has not met with success as girl students while undergoing the course itself face serious constraints. Also, framing and implementing the course according to local conditions and needs has been met almost with absolute failure.

Chapter III

The Process of Implementation of Vocational Education at College Level– An Overview

In this Chapter, it is proposed to examine the implementation of the Vocational Education programme/Scheme at the college level. During the course of the survey, the study team gathered information on vocational courses taught in 16 institutions in four selected universities. The information gathered mainly from teachers and heads of the institutions of 16 colleges we covered is included in this Chapter. Here it is worthwhile to see whether those institutions are following guidelines prescribed by the University Grants Commission (UGC) for the implementation of the vocational courses in different colleges and universities. The broad guidelines for implementations of the scheme/programme of vocational education at the degree level are as follows :

1. There should be in-built training programmes for equipping teachers of the respective institutions. The training programme should give opportunity to the teachers and principals of the institutions to interact and exchange their experiences and in turn help in conducting courses more effectively.
2. The Standing Committee on Vocational Education (SCOVE) should constitute monitoring groups, which will conduct monitoring of the programmes in the institutions teaching vocational subjects. The monitoring reports should be analysed by the SCOVE and corrective measures introduced in the programme.
3. To cater to the needs of underdeveloped and rural sectors, especially women, tribal and hilly regions, the UGC identified the following 8 subjects: - 1. Agro -service, 2. Dryland farming, 3. Rural (Handicraft), 4.

Hill Agriculture, 5. Silviculture , 6. Non-conventional Energy Sources, 7. Social Conservation & water Management 8. Industry & Wildlife Management.

4. Detailed syllabi, indicating among other things the distribution of time between theory, practical and on-the-job-training (OJT), prerequisites for the choice of subjects, periods to be allotted etc., have been worked out under the scheme.
5. Given the wide variety of educational and socio-economic situations and the autonomy enjoyed by university institutions, some modifications of the suggested course content of the vocational subjects may be undertaken by universities and colleges. It needs to be ensured however that any changes made in the context of local conditions, lead to enrichment of the syllabi and not to any dilution of the content.
6. Generally the weightage for different components of the subject should be: theory 70%, practicals-15% and OJT-15%.
7. Assessment of Students performances in the vocational subject should be made by a faculty member, who have experience of teaching the subject, drawn among others from other colleges/universities.
8. An institution may suggest a vocational subject which it expects to meet more adequately the local requirements of the job market. In this case, however the institution will have to develop a syllabus for the subject.
9. The institutions will have to make arrangements for supervised OJT in an establishment concerned with production of goods and services such as banks, insurance companies, industrial establishment's etc. which in turn may be the prospective employers for graduates of vocational subjects. It

would be useful in this context to intensify supervisory personnel of these establishments for OJT of students and assessing the level of their performance in collaboration with the college faculty.

Keeping in view the above guidelines suggested by the UGC, the study examines whether the colleges undertaking the various vocational courses are implementing these guidelines at different stages. The information on the above aspects was gathered through the structured questionnaires. This has been collected from the Heads of the Institutions, teachers and students undergoing the vocational courses at the graduate level. The aim here is to examine the process of implementation of the vocational courses at different stages. For the successful implementation of the vocational education programme, enthusiasm, coordination and cooperation is essential at different levels. The department of vocational education, the college administrators, principals and teaching staff have to strive collectively for its implementation.

The evaluation attempted here is based on the following criteria:

- (i) To see whether qualified/trained teachers are available to teach vocational subjects.
- (ii) To point out the limitations in the infrastructure.
- (iii) To see whether the students take interest in the classes and to see their performance in the courses.
- (iv) To see whether institutions are following the teacher-student ratio as prescribed by the UGC and to see further whether they follow the other norms prescribed by the UGC.

The study was undertaken for four selected universities (see Table 3.1). The survey team gathered data so as to see whether qualified teachers are available to teach vocational courses in these institutions.

1. **Availability of Qualified/Trained Teachers in the Selected Universities**

It has been found that 121 teachers are working in different vocational streams in the four selected universities as shown in table 3.1.

Table 3.1 : University-wise Number of Teachers working in Each Vocational Stream in Selected Universities

University	Vocational Stream (No.)				
	Arts, Humanities & Social Sciences	Commerce & Economics	Science	Engineering & Technology	Total
1.Gujarat, Ahmedabad	-	12	4	-	16
2.Devi Ahilya Indore	3	15	-	-	18
3.Madurai Kamraj	15	23	11	-	49
4.Karnataka, Dharwad	18	4	16	-	38
Total	36	54	31	-	121
Average No. of Teachers Working	9	14	8	-	30

Thus, an overall average of teachers working in the vocational stream of Arts & Social Sciences, Commerce & Economics, and Sciences is 9, 14 and 8 respectively. Further the distribution of teachers working at different educational levels has shown that majority of the teachers ,that is about 70% are postgraduates followed by 23% as doctorates, as shown in the table 3.2.

Table 3.2 : Distribution of Teachers in Vocational Education By Educational Levels in Selected Universities

University		Educational Level			
		1	2	3	Total
1	Gujarat	2 (12.5)	11 (68.8)	3 (18.7)	16 (100.0)
2	Devi Ahilya Indore	2 (10.5)	13 (68.4)	4 (21.1)	19 (100.0)
3	Madurai Kamraj	1 (6.7)	13 (86.6)	1 (6.7)	15 (100.0)
4	Karnataka	-	5 (45.5)	6 (54.5)	11 (100.0)
	All	5 (8.2)	42 (68.8)	14 (23.0)	61 (100.0)

1- Graduate 2- Post-Graduate 3-Doctorate
(Figures within brackets are percentages)

From the table it can be inferred that 8% of the teachers are only graduates. In most of the vocational colleges, it has been found that part-time teachers are undertaking the vocational classes and thus they are paid a minimum in the range of Rs.50-500 per period. Some of the teachers are receiving salary as per the UGC scheme.

Table 3.3 : Distribution of Teachers by Educational Level and Vocational Stream in Four Selected Universities

Vocational Stream		Educational Level			
		Graduate	Post-Graduate	Doctorate	Total
1	Arts, Humanities & Social Sciences	-	11 (73.3)	4 (26.7)	15 (100.0)
2	Commerce & Economics	22 (16.1)	5 (71.0)	4 (12.9)	31 (100.0)
3	Sciences*	-	9 (60.0)	6(40.0)	15(100.0)
4	Total	5 (8.2)	42 (68.9)	14 (22.9)	61 (100.0)

(Figures within the brackets are percentage)

* Science teachers teach Engineering & Technology also.

Most of the teachers working in the colleges are either on contract or part-time basis. The number of teachers working at different educational levels in different streams has also been studied (see Table 3.3). It has been observed that among all the streams, 14% are doctorate and in the Science stream the proportion is 40%. Needless to say some teachers are highly qualified and have got good academic background and teaching experience. But as the vocational courses are newly introduced and the stress is on the application part, particular skills needed to impart vocational training was missing in some cases.

Change in the Syllabus/Curriculum

Another objective of the study was to review the structure of the course. This relates to the question whether changes are required in the syllabus/curriculum in the vocational subject taught in universities. The information gathered from the heads of the institutions was analysed and it has been found that ten out of 16 institutions have expressed that change in the syllabus of the vocational subjects being taught at the graduate level is required as shown in Table 3.4.

Table 3.4 : University-wise Distribution of opinions of the Heads regarding the need for change in Syllabus at the Graduate Level

Sl. No.	University	No. of Institutions whether change in the Syllabus required by Vocational Stream									
		1		2		3		4		Total	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1.	Gujarat	-	-	3	-	1	-	-	-	4	-
2.	Devi Ahilya Indore	-	1	2	-	-	-	1	-	3	1
3.	Madurai Kamraj	-	1	1	1	-	1	-	-	1	3
4.	Karnataka	1	-	1	1	-	1	-	-	2	2
	All	1	2	7	2	1	2	1	-	10	6

1-Arts, Humanities & Social Sciences 2- Commerce & Economics
3-Science 4-Engineering & Technology

Further, information was collected from the teachers of the vocational subjects. This relates to the nature of changes required in the syllabus to meet the requirement of the subject course in each stream. It may be noted from Table 3.5 that majority of the teachers (60%) have expressed that updating of syllabus is required in the Commerce & Economics stream, followed by 27% in the Science stream.

Table 3.5 : Distribution of Teachers by Views regarding Nature of Changes required

Sl. No.	Nature of Changes Required	Vocational Stream (No. of Teachers)			
		1	2	3	Total
1.	Updating Syllabus	4 (16.0)	15 (60.0)	6 (24.0)	25 (100.0)
2.	More Reading Material	4 (26.7)	6 (40.0)	5 (33.3)	15 (100.0)
3.	More Practical Exposure	7 (35.6)	7 (35.6)	6 (30.0)	20 (100.0)
4.	Lecture by Experts	5 (55.6)	2 (22.2)	2 (22.2)	9 (100.0)
5	More interaction Between Teachers & Students	1 (25.0)	2 (50.0)	1 (25.0)	4 (100.0)
	All	21 (28.8)	32 (43.8)	20 (27.4)	73 (100.0)

(Figures within brackets are percentages)

Information was also collected to see whether course-contents were adequate to meet the requirements of the courses. It has been seen that majority of the teachers (52.5%) have expressed that course-content is not sufficient to meet the requirement. This is true for all the 16 institutions as shown in Table 3.6.

Table 3.6 : Distribution of Teachers according to their opinion regarding the adequacy of the course-contents

	Educational Stream	Whether course content sufficient to meet the requirement of the subject course		
		Yes	No	Total
1.	Arts, Humanities & Social Sciences	7 (46.7)	8 (53.3)	15 (100.0)
2	Commerce & Economics	13 (41.9)	18 (58.1)	31 (100.0)
3	Sciences *	9 (60.0)	6 (40.0)	15 (100.0)
4	Total	29 (47.5)	32 (52.5)	61 (100.0)

(Figures within brackets are Percentages)

* Science teachers teach Engineering & Technology also.

To assess the Students Performance in the Subject/Course

The structure of the course/subject has been reviewed on the basis of the performance of the students undertaking the vocational subjects. Their individual performances have been assessed from the interest shown by them in the classes and their performances in the examinations. One way to look into the shortcomings of the course is to look at the performances of the students pursuing the vocational course. The information on the performance of the students pursuing the vocational course was collected from the teachers taking the classes in different vocational subjects. It may be observed from table 4.7 that majority of the teachers i.e., 92 percent have stated that students take interest in the classes in all the four vocational streams. The success rate of the students appearing in the examination in the four streams is about 90 percent.

Although success rate is quite high, students scoring top marks is very low. Further, keeping in view the basic objective of the courses- that is to increase the employability, it can be noted that students are ill-equipped to get jobs. Lack of students having the requisite skills was the often-cited reason given by some of the employers for not employing pass-outs from vocational courses.

Table 3.7 : Distribution of Teachers expressing whether students take interest in the classes

Sl. No.	Vocational Stream	Whether Students take interest in the class (No.)		
		Yes	No	Total
1	Arts, Humanities & Social Sciences	15 (100.00)	-	15 (100.00)
2	Commerce & Economics	28 (90.3)	3 (9.7)	31 (100.00)
3	Sciences *	13 (86.7)	2 (13.3)	15 (100.00)
	Total	56 (91.8)	5 (8.2)	61 (100.00)

(Figures given in the brackets are percentages)

* Science teachers teach Engineering & Technology also.

Norms for Teacher-Students Ratio

It has been observed from the analysis of the data that 50 percent of the institutions are observing norms for the teacher-student ratio as prescribed by UGC and the rest are not observing as shown in Table 3.8.

Table 3.8 : Distribution of Vocational Institutions according to observance of norms regarding Teacher-Student Ratio

University	No. of Institutions Observing Norms for Teacher Student Ratio		
	Yes	No	Total
1. Gujarat	3	1	4
2. Devi Ahilya Indore	2	2	4
3. Madurai	2	2	4
4. Karnataka	1	3	4
Total	8	8	16

Availability of Qualified Teachers

It is necessary that qualified and trained teachers are available to teach the vocational subject at the graduate level. Therefore, information on this aspect was collected from each institution from the four selected universities. We found that teachers with prescribed qualifications are available easily for each vocational subjects in all the four streams of vocational education. It has been noted that all the institutions reported that qualified teachers are available to teach the vocational subjects as shown in Table 3.9.

Table 3.9 : Stream-wise Availability of Qualified Teachers in each University

University	No. of Institutions by Vocational Stream									
	1		2		3		4		All	
	Yes	No.	Yes	No.	Yes	No	Yes	No	Yes	No
Ahmedabad	-	-	3	-	1	-	-	-	4	-
Indore	1	-	2	-	-	-	1	-	4	-
Madurai	-	-	2	-	1	-	-	-	3	-
Karnataka	1	-	2	-	2	-	-	-	5	-
Total	2	-	9	-	4	-	1	-	16	-

1-Arts, Humanities & Social Sciences 2- Commerce & Economics
 3-Science 4-Engineering & Technology

Whether Satisfied with Knowledge & Skill Imparted through the Present Syllabus

One of the prerequisites for implementation of guidelines suggested by UGC regarding imparting of vocational education according to the prescribed syllabus is the satisfaction of the heads of the institutions regarding the knowledge and skill imparted by the teaching faculty to the students. It may be noted that majority of the heads of the institutions i.e., around 85 percent have reported that they are satisfied with the knowledge and skill imparted in vocational courses through the present syllabus for the labour market.

Table 3.10 : Distribution of Institutions according to the level of satisfaction with knowledge and skill imparted in Vocational Courses through the Present Syllabus

University	No. of Institutions		
	Yes	No	Total
1. Gujarat	2	-	2
2. Devi Ahilya Indore	3	1	4
3. Madurai	3	-	3
4. Karnataka	3	1	4
Total	11 (84.6)	2 (15.4)	13 (100.00)

Nature of Improvements Suggested in the courses for their Implementation .

To shed light on the implementation of the programme, structure of the courses has been studied in this section. In this regard, the teachers imparting the vocational courses were asked to give their suggestions about improvements on different aspects of the structure of the courses. The information thus gathered on this aspect has been presented in Table 3.4

Table 3.11 Distribution of Teachers according to their suggestions regarding Nature of Improvements for the Courses in each Stream (in all the Selected Universities).

Nature of Improvements	Educational Stream (No.)			
	1	2	3	All
1. More infrastructure like Library/Lab. Facilities	7 (22.6)	12 (38.7)	12 (38.7)	31 (100)
2. More Practical Classes	5 (15.1)	18 (54.5)	10 (30.4)	33 (100)
3. Apprenticeship after the Courses	5 (14.3)	15 (42.8)	15 (42.9)	35 (100)
4. More Teaching Hours		4 (66.7)	2 (33.3)	6 (100)
5. More Theoretical Knowledge	2 (28.6)	3 (42.9)	2 (28.5)	7 (100)
6. Others		3 (100)		3 (100)
All	19 (16.5)	55 (47.8)	41 (35.7)	115 (100)

1-Arts, Humanities & Social Sciences 2- Commerce & Economics
 3-Science 4-Engineering & Technology

(Figures within brackets are percentages).

It may be observed from the table that among the four educational streams majority of the teachers i.e., 67 percent have expressed that there should be more teaching hours in the Commerce & Economics stream of education, followed by 55 percent suggesting that there should be more practical classes for the students undertaking the vocational courses in this stream. As against this around 38.70 percent of the teachers have expressed that more infrastructure like library/lab. facilities are required for the improvement of the courses in both Commerce & Economics and Science streams while 22.6 percent of the teachers have given the same opinion for the Arts and humanities stream.

A number of measures can be undertaken to improve infrastructural facilities and modify the structure of the present day vocational course. People from institutions such as banks, industries, health and other areas must be included while framing vocational courses. Industrial establishments should be encouraged to start their own courses in different colleges. The preparation of teaching materials, work exercises and guide books should be in association with the people concerned rather than opting for traditional text books. The concerned regional academic institutions dealing with vocational education has to undertake preparation of teaching materials for vocational classes in regional languages. Colleges should be given permission to start vocational courses only after it has been ascertained that they have the required infrastructural facilities. In-service training programmes for teachers should be arranged so as to allow them to acquaint themselves for getting skills needed to take classes at the vocational level.

Overall, what the study team could observe is that colleges paid scant attention to the vision of the policy makers while putting UGC norms into practice although they are being financed by the UGC. The goal of increasing employability of girl students, training students according to local needs and demands of the labour market is seldom achieved. Overall, several changes and modifications are required. As many subjects are quite new, teachers are not fully trained to teach those subjects. The structure of the courses, the limitations in the infrastructure, students' performance and their job-opportunity further proves the short - comings of the vocational courses.

Chapter-IV

Employability of the Pass-outs of Vocational Courses

The University Grants Commission (UGC) introduced vocational education at the under-graduate level with the basic objective of increasing the employment opportunities of the university students at the undergraduate level. Therefore, pass-outs in the vocational courses getting meaningful employment indicates the success of the courses implemented. An evaluation of the vocational education naturally implies that the survey should find out whether the basic objective of the courses, that is increasing the employability of students who passed out the vocational courses is fulfilled or not.

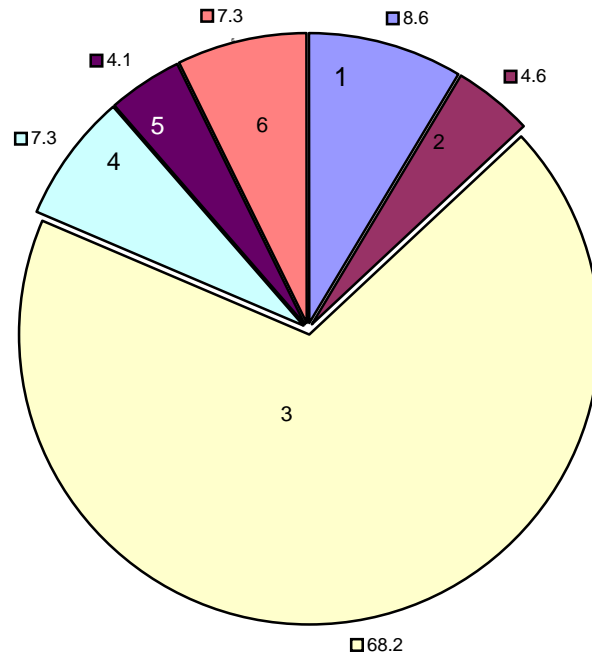
In all, the survey could cover 151 pass-outs from four different universities -- Ahmedabad University- Gujarat, Devi Ahilya University- Indore, Madurai Kamraj University and Karnataka University -Dharwad (See Table 4.1). The survey carried out in four different cities of Ahmedabad, Indore, Madurai and Dharwad was basically restricted to in and around the cities only. The survey team met pass-outs in and around cities or at their homes or at their work places. Pass-outs of all the four streams namely (i) Arts, Humanities & Social Sciences, (ii) Commerce & Economics, (iii) Sciences and (iv) Engineering & Technology were covered during the course of the survey.

Table 4.1 : Distribution of Total Number of Pass-outs by Sex and Vocational Stream

Stream	Male	Female	Total
1. Arts Humanities & Social Sciences	41	16	20
2. Commerce & Economics	41	39	80
3. Sciences	25	11	36
4. Engineering & Technology	15	-	15
Grand Total	85	66	151

As the vocational course became operational only by 1994-95 academic session, it was indeed very difficult for the survey team to make a meaningful assessment of the employability of these courses. Moreover, in many places students opted for higher education related to the vocational education at the Master's level or they have further gone for diploma courses for a year or so. Apart from those who have not opted for further education we found that some pass-outs go for jobs, some find self-employment, some go after family business/occupation and many girls have settled as housewives.

Distribution of Pass-out by Activity Status



	<u>Number</u>	<u>Percentage</u>
1. Having a paid job	13	(8.6%)
2. Working as self employed or in family Enterprise	7	(4.6%)
3. Unemployed and looking for a job	103	(68.2%)
4. Unemployed but not looking for a job	11	(7.3%)
5. Housewife	6	(4.1%)
6. Others (including those persuing higher studies)	11	(7.3%)
Total :	151	

The diagram shows that majority of the pass-outs are unemployed. The data presented here as well as in other tables is based on the experiences the survey team had in the field. One may say with some sense of conviction that the employment opportunities of students who passed out differs from subject to subject. While pass-outs of some subjects, which are in tune with modern industrial development, revolution in information technology and market needs do get jobs easily, others find it difficult to place themselves. Also, while the bargaining power of the former is quite good, the latter has to struggle a lot to have the same bargaining power. For example, we found that the students who underwent course in computer applications got jobs easily while Tax procedures & practices could not find the same acceptance.

Among the 14 subjects covered, it was noticed that the maximum employment opportunity existed for Computer Applications, Electronic Equipment Maintenance and Computer Maintenance. The subjects with relative or medium opportunity were Advertising, Sales Promotion & Management, Industrial Chemistry and Bio-technology. All other subjects like functional language courses, Tax procedures & practices, Office Management and Sericulture were found with no or minimum job availability.

Only 13 pass-outs were found to have full time paid jobs and we found one each in industry and business while the rest eleven were employed in service sectors. Twelve were found to be in private sector and only one could get jobs in the government sector.

Their incomes show that 11 out of 13 are getting only less than five thousand rupees per month. One is getting between five thousand and ten thousand and one among the thirteen is well placed, earning above ten thousand. Among the thirteen 10 were temporary and only 3 have become permanent employees (See Table 4.2). The very small number of the employed, their low monthly income and the status of the job suggest that, most of the pass-outs are hunting for jobs and those who have already found jobs are struggling to gain acceptance.

Table 4.2: Stream-wise Distribution of Employed Pass-outs by nature of job and current status of jobs

Vocational Stream	Nature of Job		Current Status of the Job	
	Private	Government	Temporary	Permanent
1. Arts Humanities Social Science	-	-	-	-
2. Commerce & Economics	8	-	6	2
3. Science	2	-	2	-
4. Engineering & Technology	2	-	2	1
5. Grand Total	12	1	10	3

Most of the pass-outs who were employed stated that their job is related to the vocational course they attended. Out of 13, eight said that it is related while only 5 said that it has no relation to the present job they are doing. Further, most of them stated that they are satisfied with the knowledge and skill acquired from the vocational course at the undergraduate level. Nine of them said that they are fully satisfied while only 4 stated that they have dissatisfaction.

Among the 151 pass-outs we covered, only eleven could start their own enterprises. Out of them, seven went to rural areas to start their enterprise while four remained in urban areas.

The vast majority of the pass-outs we covered were looking for a job at the time we carried out the survey. Out of the 151, more than 100 were on the look out for a job. This includes those who were pursuing higher studies and also those who were self-employed. Out of 138 unemployed we surveyed, 112 said that they are in the process of hunting for a job. Of the 138, sixty-one were registered with the employment exchange and many were planning to register soon. Most of the job hunters had been waiting for more than one year or so. Occasionally, they had worked in some places. The high level of unemployed waiting for a job, even the temporarily-employed looking for a permanent job and the self-employed looking for permanent government jobs clearly show that the basic aspiration of getting a permanent government job still remains as a pet dream among the average unemployed youth in the country. The data further show that vocational education course failed to meet its one main objective, i.e., to increase self-employment among the pass-outs.

Most of the unemployed pass-outs we covered specifically told us that they prefer government job. In the course of the survey, the study team gathered information about job preferences of the pass-outs- whether they are ready to work within their home state or anywhere in the country, whether in government organization or private organization or in public sector or private sector (See Table 4.3).

Table 4.3 : Stream-wise Distribution of Unemployed Pass-outs willing to accept employment by boundary-specific, ownership-specific and location-specific areas

Educational stream	Willing to accept employment by specific Areas							
	Boundary Specific		Ownership Specific				Location Specific	
	Only within the home state	Anywhere in the country	Govt. Organisation	Private Organisation	Public Sector	Autonomous	Rural Areas	Urban Areas
Arts, Humanities & Social Sciences	9	9	13	4	1	1	3	12
Commerce & Economics	47	21	36	19	8	5	14	51
Sciences	11	16	14	10	-	1	9	15
Engineering & Technology	1	11	5	3	1	2	5	5
All	68	57	68	36	10	9	31	83

Vast majority of the unemployed preferred government jobs. They did not bother much about whether they would be getting jobs in their home state or not. Regarding ownership also majority of the pass-outs preferred the public sector although disinvestment by the government is already happening in the Indian Public Sector. It seems that information regarding sell out of public sector units has not fully been gathered by the unemployed youths in this country. A large chunk of the pass-outs, i.e., 83 out of 114, preferred urban areas compared to rural areas in terms of location of job.

Most of the pass-outs found the course useful. But they suggested improvements namely more practical sessions, improvements in teaching, inclusion of apprenticeship and campus recruitment. Out of the 151 pass-outs we covered , 46 suggested more practical sessions, 33 of them wanted improvement in teaching , 28 wanted short term apprenticeship after the course and 40 thought that campus recruitment would help increase the employability of the pass-outs. Some suggested all the above measures for improving the quality of vocational education (See Table 4.4)

Table 4.4 : Stream-wise Distribution of Pass-outs by nature of improvements suggested.

Vocational Stream	Nature of Improvements Suggested					Total
	More Practical Sessions	Improve ment in Teaching	Inclusion of Apprentic eship	Campus Recruitme nt	Any Other	
Arts, Humanities and Social Sciences	4	1	1	2	-	8
Commerce and Economics	23	15	10	19	5	72
Sciences	11	10	12	12	1	46
Engineering & Technology	8	7	5	7	3	30
All	46	33	28	40	9	156
Percentage	29.49	21.15	17.95	25.64	5.77	100.00

The above analysis shows that it is very hard to have proper understanding of the employability of the pass-outs as the course is a very recent one and as the number of pass-outs are very few. Also as most of the pass-outs are in the hunt for a job, it is indeed difficult to find employed pass-outs and draw clear conclusions from them.

The attitude of the pass-outs of vocational courses as revealed through this survey does not differ much from other studies showing the attitude of an average unemployed youth in India. Looking for a government job, that too in a public sector located in an urban area shows clearly the attitude of the pass-outs of not willing to come to terms with the reality or not knowing the exact reality about the job availability in this country. This further calls for necessary action from planners and policy makers to instill new ways of thinking among the unemployed youths in this country. It further prompts us to explore measures to increase the employability of the pass-outs of vocational courses, particularly to promote self-employment, which is covered in the next chapter.

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Chapter V

Vocational Courses : Aspects of Employability among the pass-outs

Heads of the Institutions, teachers, students, pass-outs and experts suggested many changes in the present syllabi of the vocational courses. Many subjects could be added or deleted in view of the needs of the labour market and changes in the industrial world. Regarding the introduction of courses relevant to the primary sectors like Agriculture, Dairy and Veterinary also there were many useful suggestions.

To increase the employability among the students undergoing vocational subject viz., **Office Management and Secretarial Practice**, most of the teachers and students we interviewed emphasised that instead of typing and shorthand, advanced computer applications with the use of internet must be taught to the students. They also wished to be taught basic management techniques by M.B.A.s as in the era of liberalization more weightage is given in the job market to the candidates who possess business and managerial skills. Regarding their B.A. course, they were of the opinion that not full coverage is given to which they felt would be useful.

Regarding the vocational subject like **computer applications**, taught along with commerce, teachers and students were of the view that subjects like structural programming, DBMS II should be taught fully. As against this, at present only the basics are taught. If the Computer Course is taught in full, it would be useful to get jobs easily and would also be useful for higher studies. The subject of Autocad they felt should be

omitted and the courses relating to commerce like tally software, MS Office, e-com should be included. Students who are studying computer applications along with physics and mathematics also suggested many changes. Both teachers and students observed that physics and mathematics which are taught along with computer applications should be done away with as this is not job-oriented and at the same time put too much pressure on the students. Instead of giving the computer applications as optional, B.Sc. computer applications should be a course of its own. It would increase students' employability. Many college authorities told the study team that funding is insufficient as lot of money is needed for buying computer infrastructure. Both commerce students as well as science students suggested constant updating of syllabus as new things are coming up in the field from time to time. Old versions of softwares must be excluded and the course should include multi-media, internet training, web-designing etc. At all places, it has been noticed that students desired more time for practical classes.

For the vocational subjects such as **Functional English**, students desired more laboratory facilities and field trips to improve their pronunciation and communicative skills. Students said that they needed more practical classes to improve their pronunciation. Field trips are necessary to acquaint themselves with the mode of broadcasting and new methods of communication. Little literature and little grammar are taught to them while studying the course. The functional aspect, which need to be highlighted is not done so. Therefore, the basic objective of the course remains unfulfilled.

For **Industrial Chemistry**, the teachers desired more linkage with the industries. Only a very small part Industrial Chemistry of the B.Sc. level relate really to Industrial Chemistry. There is no experience in large industries and so the students lack practical experience. The students desired for more industrial visits and wanted more teachers trained in the newly included subject, that is Industrial Chemistry.

The survey team found that the subject **Functional Sanskrit** has not become popular. Many students are unaware of the existence of such a subject for the vocational course. Although many parents want their children to study Sanskrit, due to lack of information, they could not send the children to learn the particular subject. As Sanskrit is not taught at 10+2 level, learning Sanskrit all of a sudden becomes problem for the students. The remedial measure they suggested was that Sanskrit should also be taught at 10+2 level so that students learn the basics of that language. As in many colleges where Sanskrit is taught, students have to go to orthodox institutions outside the college campus. Dalit and Muslim students have problem in learning Sanskrit as they face many social barriers.

Regarding the vocational subject **Tax Procedures and Practices**, many students remarked that practical training is necessary along with the course. Also, it is better to include Chartered Accountants in the teaching faculty.

Students of **Advertising & Marketing** have given a number of valuable suggestions for improving the course. They suggested that teachers should organise monthly visits to advertising agencies and marketing firms. Students want seminars and group discussions to be introduced by professionals of specific subjects. Along with the course, there must be internship to get the job. Students must be encouraged to refer to the books of international authors. Indian marketing and Indian advertising must be taught. Also there must be good project work and experience of good industry. Audio-visual aids are also required. Students want visit to companies which will provide them with a knowledge of the working of companies. Students also wanted them to be sent to various advertising agencies. Instead of the age old theories, they observed, latest techniques and fundamentals should be taught. Advertising is entirely related to creativity, which can be learned only by practice and by knowing advertising techniques and processing in toto. So instead of mere theory, presentation, group discussions, training related to different sections of copy writing, media managing etc., should be included.

Ways to increase the Employability among the Pass-outs

In the era of globalization when one is aware of the fast changing technologies and new areas emerging, naturally one can infer that new employment opportunities are coming in the labour market based on new technologies and consumer preferences. Depending on the new employment opportunities coming up in the labour market, vocational courses can be re-modelled so that it gives further inspiration to job seekers

and in the process it will help the economy to have further vibrancy. Economy on the one hand can create more employment by augmenting production with quality products with the use of skilled manpower from vocational institutions.

During the course of the survey, heads of institutions, teachers, students, pass-outs and the policy makers suggested many new areas which will create new employment opportunity. The new stream-wise suggested areas are:.

- | | | | |
|------|------------------------------------|------|--|
| I. | Arts, Humanities & Social Sciences | i) | Epigraphy |
| | | ii) | Archaeology & Museology |
| | | iii) | Business Enterprise |
| | | iv) | Desk Top Printing |
| | | v) | Journalism |
| | | | |
| II. | Commerce & Economics | i) | E-Commerce |
| | | ii) | Foreign Trade, Tourism & Travel Management |
| | | | |
| III. | Sciences | i) | Herbal Medicine |
| | | ii) | Course on Cottage Industries |
| | | iii) | Instrumentation & Geo Exploration |
| | | iv) | Agro-Processing |
| | | v) | Petro-Chemicals, Bio-Pesticides & Composting |
| | | vi) | Medical Transcription |

- IV. Engineering & Technology
- i) Construction Technology
 - ii) Information Technology

There were valuable suggestions to introduce courses on the primary sectors namely Agriculture, Veterinary and Dairy. Some of the subjects suggested for vocational courses are as follows :

- | | | |
|-------------|---|--|
| Agriculture | - | Organic Farming, Tissue Culture ,Bio-Pesticides, Petro-Chemicals & Composting. |
| Veterinary | - | Meat Processing & Preservation, Animal Husbandry & Poultry. |
| Dairy | - | Milk Processing, Dairy Products Manufacture. |

One of the major objective of the study was to identify courses exclusively meant for women students so that their employability chances increase and women become major wage earners. So we specifically asked people about the constraints girl students faced while undergoing vocational courses and to identify the courses for them. Some of the notable observations we got regarding the constraints of girls undergoing vocational courses, apart from social constraints like economic and social barriers, superstition etc., are :

- Majority of the present vocational courses do not provide adequate competence and confidence to girls

- Majority of the girl's colleges do not have vocational courses
- Timings of the colleges do not encourage women students to take such courses
- Long duration of the courses comes in their way
- Irrelevance of existing courses which do not take into account specific needs of communities from where girl students come

Here it may be noted with a fair degree of accuracy that universities while framing courses have not looked into local conditions, needs and aspirations. Lot of work can be done by people with vision in local universities to frame the courses looking into the conditions and needs of the specific locality and this alone will help to increase the employability of girl students.

There were many suggestions for improving the skill formation and modernisation of our traditional sectors like fisheries, textiles, leather goods, coir etc. Some of the specific courses recommended were:

1. Aqua Culture
2. Marine Fisheries
3. Fish Processing & Technology
4. Designing & Marketing of Textiles
5. Course on Mechanisation of Rural and Cottage Industries depending on the locality

Here again the policy makers must keep in mind the local conditions and needs. Employability may also be enhanced if policy makers skillfully frame the course so that output can be increased in the local production ventures.

Many experts suggested that vocational training can also be given for modernising carpentry, masonry, jewelry and other related fields. The main effort here must be to provide knowledge of Science & Technology and their application. It must be linked with industry and skill training must be given in enterprises associated with production of related goods. Also, there was a suggestion that without prescribing proper qualification one can request the experts to conduct short-term training programmes. This can be done without syllabus as the practice of above-mentioned professionals may vary from locality to locality.

It was also suggested by experts that vocational education scheme can make use of the new revolution in information technology (IT) and introduce courses related to advanced computer applications, internet usage, E-Commerce, medical transcriptions and other related fields. Some of the courses suggested were:

- (i) In-service courses on E-governance
- (ii) Internet usage
- (iii) E-Commerce
- (iv) Medical Transcriptions
- (v) Information Technology
- (vi) Software Development

One thing which needs to be highlighted is the need for looking into local specifics while framing the courses. Framing courses according to local conditions can go a long way to increase the employability of women, tribals and other marginalised groups. Introducing vocational education will also help them to have training in modern ways suited to the ways of industrialised world and the needs of the labour market. People working in the traditional sectors can also be given training in the above-suggested lines. Short-term courses can also be given for modernising jewellery, carpentry, masonry and other related fields, and vocational courses would go a long way in mechanising those sectors with the net result of boosting production and employment.

Chapter VI

Summary and Conclusions

Vocational Education at the undergraduate level was introduced basically because of the lack of employment opportunities for pass-outs of the conventional degree courses. Employment possibilities of graduates and post-graduates in general subjects were becoming increasingly limited and vocational scheme was implemented by the UGC in 1994-95 with the primary objective of increasing the employability of graduates. Equipping the graduates with the skills needed for self-employment, improving the employability of girl students, making the graduate course suited to local needs and conditions etc., were some of the major objectives of the vocational courses. So, along with conventional degree courses, one vocational subject was added from 35 identified subjects in four streams, viz., (I) Arts, Humanities and Social Sciences; (ii) Commerce & Economics; (iii) Sciences; (iv) Engineering & Technology.

Increasing the employability of graduate students became an urgent necessity as the state started moving away from its role as the provider of jobs with the liberalisation introduced in India from mid 1980s. Liberalization and globalization became more pronounced from early 90s onwards with the disinvestment in Indian public sector, the free flow of capital and technology and the revolution in information technology. Simultaneously, many new sectors opened up and new job opportunities were also thrown up which required only minimum training. Vocational courses were meant to incorporate all these changes and impart skills to the students undergoing vocational courses accordingly.

The IAMR undertook this study on vocational education with the basic objective of reviewing the existing courses by looking at the employability of the pass-outs, the limitation in the infrastructure and the improvements required. To suggest ways and means to improve the employability of girl students and to make the course suited to local needs and conditions was also the objective of the study. Structured questionnaires were given to heads of institutions, teachers, students, pass-outs and experts dealing with vocational education. The study team covered four states namely, Tamil Nadu, Karnataka, Gujarat and Madhya Pradesh. The universities covered are : (i) Madurai Kamraj University. (ii) Karnataka University, Dharwad (iii) Gujarat University, Ahmedabad and (iv) Devi Alhiya University , Indore. Besides the members of the study team, local investigators were appointed to solicit views from pass-outs and others.

One has to look at the broad guidelines issued by the University Grants Commission before commenting on whether things are practically implemented or not. The study team's field visit was basically to examine whether the detailed guidelines issued by UGC has been followed in the field. Before stating our conclusions a glance at the UGC guidelines will certainly help to understand the problem better. The broad UGC guidelines regarding the basic objectives of the courses are :

- (i) Considering the limited absorptive capacity of the organized sector the emphasis in the proposed vocational courses would have to be on the development of capabilities required for self-employment and diversifying

the informal sector and for upgrading the productivity of household occupations.

- (ii) The emphasis of the vocational courses should be on gainful employment particularly self-employment .

About the implementation of vocational education at the college level, UGC has given following suggestions :

- (i) Apart from 35 subjects which have been identified for support, an institution may suggest a vocational subject, which it thinks will meet local requirements, from the job market point of view. In this case, however, the institution will have to develop a syllabus for the subject. The structure and the format of the new subject(s) proposed for introduction should largely follow the pattern of syllabi for 35 subjects and should be approved by university before submission to the UGC.
- (ii) For each subject maximum number of students should be 30.
- (iii) In addition to the vocational subjects proposed to be introduced, every student will have to study compulsorily a short course on Entrepreneurial Development for which a broad outline has already been designed. This course is expected to provide students with knowledge and skills required for working as a self- employed person. In the absence of a qualified faculty, this course can be taught through guest faculty from other institutions and employing establishments.
- (iv) Institution must assure availability of core faculty in the institute itself.

- (v) Laboratory and workshop and infrastructure modernization have to be undertaken from the resources of the institutions.
- (vi) Institutions are expected to raise additional resources other than the UGC assistance for five years.
- (vii) On-the-job-training should be an integral part of the proposed vocational subjects. The training should be given in employing establishments under joint supervision of the establishments' supervisory personnel and the faculty of vocational institutions. Vocational education institutions have to make arrangement for on-the-job-training for students undergoing the course.
- (viii) Memorandum of understanding (MOU) with the employing establishments is desirable.
- (ix) There should be general awareness about the course.
- (x) Stipends should be given to students during their on-the-job-training.
- (xi) There should be appropriate mechanism for monitoring and evaluation of the entire programme.

An evaluation of vocational education scheme was done by the study team to see whether the above mentioned objectives have been fulfilled or not with the limited manpower and resources at our command. Paucity of time was a major constraining factor. Another problem was that only a few of the pass-outs were employed as the vocational courses are quite new. But in spite of all the above cited problems a proper evaluation was done. The result of the evaluation actually presents a very dismal picture of the vocational courses as it exists today. The main observations of the study team are the following :

- (i) Overall the vocational courses have instilled a yearning for job among the undergraduates. More than ninety-six percent of the students undergoing vocational course indicated in our survey that they want to work either in some organizations, or start their own enterprise or to contribute to the family enterprise.
- (ii) Vocational courses have failed to detract student's aspiration for a government job and promote self-employment. During the course of our survey, 60 percent of the total students contacted rated a government job as their first priority and 25 percent opted for private jobs. Most of the pass-outs also specifically told us that they prefer government jobs. This means that the general perception of candidates looking for employment holds among the undergraduates at vocational level also.
- (iii) The study team could not find any enrichment of the course content according to local needs and conditions in the four universities we covered although the UGC allows universities to modify the courses that way. In fact, lack of vision of the university and college authorities act as a major handicap as they cannot equip students with the requisite knowledge needed for local advancement.
- (iv) Lack of infrastructure and absence of teachers trained especially for the vocational course act as a major handicap for the course. In fact the study team could not find a single college where students are using laboratories/workshops of other institutions or establishments although the UGC guidelines desires that way. Field visits and visits to companies are almost absent. Timely availability of reading materials and adequate library facilities are also not there. Teachers equipped with the special skills needed to teach the new vocational subjects are very few. As the course is quite new, many teachers and institutions are still unaware of the objectives of the course.

- (v) The study team could not find continuous upgradation of the course. Continuous upgradation requires good vision regarding the needs of the labour market, local needs and conditions, ways to increase employability among girl students and so on. Apart from these, the authorities while drafting the syllabus should have an in-depth knowledge and they should be further aware of latest trends in the discipline. But, unfortunately, such visionary efforts are lacking in the case of vocational courses.
- (vi) No proper monitoring and evaluation of vocational courses has been going on. Continuous monitoring, proper evaluation and constant upgradation were planned by policy makers while framing vocational courses. But this has been seldom carried out.
- (vii) We found very little awareness about the existing vocational course structure. Unless and until awareness is there, students cannot apply for vocational degree courses after 10+2 (pre-degree) course. Many subjects such as functional Sanskrit are totally unheard of among the students.
- (viii) Regarding employability - the main objective of the courses, we found vocational courses almost failing to achieve that objective. Seldom on-the-job-training is given to vocational students. We could not find any memorandum of understanding (MOU) between vocational institutions and employing establishments. Also, the study team could not find any institution stipulating apprenticeship training or giving stipends to the students. Further, there was no career guidance and counseling. Campus recruitment was almost totally absent.
- (ix) Increasing the employability of girl students has also met with little success. Apart from social constraints, the timings in the colleges, long duration of the course etc. comes in the way of girls opting for vocational

courses. It seems all institutions have failed to draw up innovative ways to introduce courses so as to increase the employability among girl students.

Recommendations

Understanding the causes of the dismal picture of the vocational education scheme itself calls for solutions. The recommendations presented here are the views that the study team gathered from various quarters, namely the views expressed by different people met in the field, the views expressed by experts on this topic and data we gathered from structured questionnaires given to Heads of Institutions, Teachers, Students and Pass-outs. The main recommendations are the following :

- (i) Re-orientation of the students undergoing vocational education for gainful employment particularly self-employment. This aspect acquires utmost importance due to the changes in society and state policies and also due to new job opportunities. Vocational students are found ill-equipped to cope with the present situation and also they have not developed the mindset to start their own enterprises. So orientation classes, career guidance, link-up with financial institutions to give them temporary loans etc., will serve the purpose. Students should be encouraged to start their own enterprise – especially in rural areas.
- (ii) Linkage with industries and on-the-job-training should be made mandatory for all vocational students. Apprenticeship after the course in educational institutions and stipend during the period will encourage the students to get knowledge about the practical aspects of the course and will get them used to challenges they could face in the near future.
- (iii) There should be a proper awareness of the course. Usefulness of the course can be popularized to the students at the 10+2 level. Some of the subjects taught at the degree level can be taught at the 10+2 level also.

- (iv) A number of measures can be taken to improve teaching and modify the infrastructure. People from institutions such as banks, industries, health and other areas must be included while framing vocational courses. The preparation of teaching materials, work exercises and guide books should be in association with these people rather than opting for conventional text books. The concerned regional academic institutions dealing with vocational education has to undertake preparation of teaching materials for vocational classes in regional languages. Colleges should be given permission to start vocational courses only after it has been ascertained that they have the required infrastructure. In -service training programmes for teachers should be arranged so as to acquaint themselves for getting skills needed as vocational subjects are quite new. Teachers must also be encouraged to undertake field trips along with the students so as to acquire new skills and knowledge related to their subject.
- (v) There must be a proper mechanism for monitoring, evaluation and upgradation of vocational courses at all the universities where vocational courses are implemented. The study team could not come across any such mechanism in the universities although UGC guidelines stipulate that.
- (vi) A number of new subjects can be introduced along with the 35 subjects already existing. They are the following in the stream-wise order :

- | | | |
|----|------------------------------------|------------------------------|
| I. | Arts, Humanities & Social Sciences | (i) Epigraphy |
| | | (ii) Archaeology & Museology |
| | | (iii) Business Enterprise |
| | | (iv) Desk Top Printing |
| | | (v) Journalism |

- II. Commerce & Economics
 - (i) E-Commerce
 - (ii) Foreign Trade, Tourism & Travel Management

- III. Sciences
 - (i) Herbal Medicine
 - (ii) Course on Cottage Industries
 - (iii) Instrumentation & Geo-Exploration
 - (iv) Agro-processing
 - (v) Petro Chemicals, Organic Farming, Bio-pesticides & Composting
 - (vi) Tissue Culture
 - (vii) Meat Processing and preservation, Animal Farming & Poultry
 - (viii) Milk Processing & Dairy Products Manufacturing
 - (ix) Aqua-Culture, Marine Fisheries and Fish Processing Technology
 - (x) Medical Transcription

- IV. Engineering & Technology
 - (i) Construction Technology
 - (ii) Information Technology
 - (iii) Designing & Marketing of Textiles.

- (vii) The vocational courses must also relate to local needs and conditions. So field experience, imparting knowledge about local needs, knowledge on local resources and their commercial use and training in modernising local industries must be included in the syllabi.

- (viii) New measures and methods must be included to increase the employability of girl students. Timings of the colleges and duration of the course must be changed to meet the requirements of the girl students. Also modifications must be made in the existing course structure to meet the specific needs of communities from where girl students come.

- (ix) A market survey is desirable to see further shortcomings. An in-depth study to focus on shortcomings of all the 35 subjects will be extremely useful. That can be left to a more ambitious research project.

Annexure-I

Proposed Combinations of Subjects

S1. No.	Vocational Subject	Other Two Pre-requisites	Subjects Preferable	Subjects studied at +2 Level
1.	Industrial Chemistry (Seven Streams)	Chemistry and	Mathematics	PCM/B
2.	Food Science & Quality Control	Chemistry	Any Science Subject	PCB
3.	Clinical Nutrition Dietetics	Chemistry	Any Science Subject	PCB
4.	Industrial Microbiology	Chemistry	Botany or Zoology	PCB
5.	Bio-technology	Chemistry	Botany or Zoology	PCB
6.	Biological Technique	Zoology and	Botany	PCB
7.	Seed Technology	Botany	Chemistry	PCB
8.	Sericulture	Botany	Zoology	PCB
9.	Industrial Fish & Fishery	Zoology	Chemistry	PCB
10.	Instrumentation	Physics and	Mathematics	PCM
11.	Optical Instrumentation	Physics and	Mathematics	PCM
12.	Geoporation & Drilling Technology	Physics	Mathematics/Chemistry	PCM
13.	Mass Communication Video Production	Any Arts, Science or Commerce Subject	Any Arts, Science or Commerce subject	Any
14.	Still photography Audio Products	Any Arts, Science or Commerce Subject	Any Arts, Science or Commerce subject	Any
15.	Electronic Equipment Maintenance	Physics	Electronics	PCM
16.	Computer Maintenance	Physics	Computer	PCM
17.	Electrical Equipment Maintenance	Physics	Electronics	PCM
18.	Environment & Water Management	Chemistry	Science	PCM/B
19.	Rural Technology	Physics	Mathematics	PCM
20.	Automobiles Maintenance	Physics	Mathematics	PCM
21.	Air conditioning	Physics	Mathematics	PCM
22.	Construction Tech. Management	Physics	Mathematics	PCM
23.	Computer Maintenance	Maths/Computer	Computer	PCM
24.	Archaeology & Museology	Geology	Geology/Anthropology	Science/Sanskrit/English/Histroy
25.	Functional Sanskrit	Sanskrit	Any*	Sanskrit
26.	Communicative English	English	Any*	English
27.	Functional Hindi	Hindi	Any*	Hindi
28.	Advertising, Sales Promotion & Sales Management	Any*	Any*	Any*
29.	Foreign Trade Practices and Procedures	Commerce/Economics	Any*	Economics & Commerce
30.	Principles & Practices of Insurance	Any*	Any*	Any*
31.	Acturial Science	Any*	Any*	Any*

32.	Tax Procedures & Practices	Commerce	Any*	Accountancy /Business Studies
33.	Office Management & Secretarial Practice	Any*	Any*	Any*
34.	Tourism and Travel Management	Any*	Any*	Any*
35.	Computer Applications	Any*	Any*	Preferably Computer

P = Physics, C = Chemistry, M = Mathematics, B = Biology

* See the subject details for guidance

SCHEDULE-I

**A Study on “An Evaluation of Vocational
Education Scheme of UGC”**

**Schedule
For
Heads of Vocational Education Institutions/Colleges**

**Institute of Applied Manpower Research,
Indraprastha Estate, Ring Road,
New Delhi-110002**

A Study on “An Evaluation of Vocational Education Scheme of UGC

**Questionnaire 1 : To be canvassed among the Heads of Universities/
Institutions/Colleges Imparting Vocational Education Courses
at Under Graduate Level.**

1. Identification Particulars :

**1.1 Name and Address of the Institution -----
---**

Place (Town/City) -----

**District ----- State ----- Pin -----
--**

1.2 Location [Rural] [Urban]

1.3 Year of Establishment -----

**1.4 Type of Institution -----
(Private, Govt., Govt. aided)**

**1.5 Please furnish in case of vocational college, the name of university affiliated to
-----**

2. Course-wise Teaching Staff in different vocational streams.*

Sl. No.	Name of Vocational Streams	No. of Teachers Working
1.	Arts, Humanities & Social Sciences	
2.	Commerce & Economics	
3.	Sciences	
4.	Engineering & Technology	

*** The name of vocational streams and subjects are given in the Annexure**

2.1 Is there a norm prescribed by the UGC with regard to Teacher Student Ratio? [Yes]
[No]

2.2 If yes, state the norm for each stream

1.	Arts, Humanities & Social Sciences
2.	Commerce & Economics
3.	Sciences
4.	Engineering & Technology

If No, Please give the following information.

Area/Discipline/Course		No. of Teachers required
1.	Arts, Humanities & Social Sciences	
2.	Commerce & Economics	
3.	Sciences	
4.	Engineering & Technology	

2.3 Are qualified teachers available to teach vocational subjects prescribed [Yes]
[No]
at the Under Graduate Level

If No, List out the specific subjects in which qualified teachers are not available.

Area/Discipline	Subjects/Courses

2.4 Do you feel there is adequate job opportunities for these vocational [Yes]
[No]
courses in the market?

If Yes, please tickmark the organisations where the job opportunities are available.

Govt. []
Semi Govt. []
Autonomous Bodies []
Private (Formal) []

Private (Informal) []

Any other (Pl. specify) []

2.5 Do you have separate campus recruitment for the students undergoing these courses? [Yes]
[No]

If yes, please give the coursewise information on the placement of the students.

Year	Subject/Course	No. of Students Appeared		No. of Students Selected	
		Boys	Girls	Boys	Girls
1994-95					
1995-96					
1996-97					
1997-98					
1998-99					

2.6 Do you feel that there should be a change in the syllabus of the vocational courses taught at the under graduate level? [Yes]
[No]

If yes, please give the information on the following.

Course taught	Type of change in the syllabus

2.7 Please suggest which of the courses should be deleted/added keeping in view the labour market demand.

Discipline/Area	Course to be added	Course to be deleted

--	--	--

- 3. Please list out disciplines/subjects being taught at the under graduate levels in vocational courses along with their intake and outturn during 1998-99.**

Discipline Subject	Intake (1998-99)		Outturn (1998-99)	
	Male	Female	Male	Female

- 4. In view of changes in the socio-economic and technological spheres, please indicate new occupations likely to emerge in specific sectors.**

Sector	Type of emerging occupations/jobs
1. Primary Sector (Diary Agriculture, Veterinary)	
2. Industrial Sector	
3. Services Sector	

- 5. Please indicate the new Vocational Subjects/Courses to be introduced for the above emerging occupations/jobs**

	Emerging Occupations/Jobs	Proposed new vocational course/subject at the Graduate Level
1.		
2.		
3.		
4.		
5.		
6.		
7.		

6. Are you satisfied with knowledge and skill imparted in vocational courses through the present syllabus for the labour market? [Yes]
[No]

If No, please give suggestions for improvement in course contents by level and discipline/subject.

Level/Stream	Subject	Suggestions for improvement	
		Addition	Deletion

7. Please indicate the Vocational Subject if any, which has become redundant/decaying as a result of technological and other changes.

Redundant Subject	Level at which being taught
	Ist Year
	Iind Year
	IIIrd Year

8. Has the Institute got any linkage with industrial houses/factories to train and recruit students? [Yes]
[No]

If Yes, please give the following details about the facilities provided by industrial houses.

- a) Giving Lectures []
- b) Practical training []
- c) Field visits []
- d) Any other (Pl. Specify)

9. Do you think that the, vocational courses are advantageous to girl students?[Yes] [No]

If yes, please list out present course and suggest new courses for girl students.

	<u>Present Course</u>		<u>New Courses</u>
1.		1.	
2.		2.	
3.		3.	

10. Do you think that there are some constraints for girl students to undergo these courses? [Yes] [No]

If yes, please list the constraints.

ARTS, HUMANITIES AND SOCIAL SCIENCES

1. **Functional Hindi**
2. **Functional Sanskrit**
3. **Communicative English**
4. **Archaeology & Museology**

COMMERCE AND ECONOMICS

1. **Principles & Practices of Insurance**
2. **Actuarial Science**
3. **Office Management & Secretarial Practice**
4. **Tax Procedures & Practices**
5. **Foreign Trade Practices & Procedures**
6. **Tourism and Travel Management**
7. **Advertising, Sales Promotion & Sales Management**
8. **Computer Applications**

SCIENCES

1. **Industrial Chemistry (Seven streams)**
2. **Food Science & Quality Control**
3. **Clinical Nutrition Dietetics**
4. **Industrial Microbiology**
5. **Bio-technology**
6. **Biological Technique & Specimen Preparation**
7. **Seed Technology**
8. **Sericulture**
9. **Industrial Fish & Fishery**
10. **Instrumentation**
11. **Optical Instrumentation**
12. **Geo-exploration & Drilling Technology**
13. **Mass Communication Video Production**
14. **Still Photography Audio Products**

ENGINEERING & TECHNOLOGY

1. **Electronic Equipment Maintenance**
2. **Computer Maintenance**
3. **Electrical Equipment Maintenance**
4. **Environment & Water Management**
5. **Rural Technology**
6. **Automobiles Maintenance**
7. **Refrigeration & AC Maintenance**
8. **Construction Tech. & Management**
9. **Manufacturing Process**

SCHEDULE-II

**A Study on “Evaluation of Vocational
Education Scheme of UGC”**

**Schedule
For
Teachers Imparting Vocational Education Courses**

**Institute of Applied Manpower Research,
Indraprastha Estate, Ring Road,
New Delhi-110002**

A Study on “Evaluation of Vocational Education Scheme of UGC”

Questionnaire II: To be canvassed among teachers imparting Vocational Education Courses at under graduate level

1. Identification Particulars

1.1 Name -----

1.2 Designation -----

1.3 Address of the Institution -----

1.4 Name of the Division/Department -----

1.5 a) Educational Qualification

[Graduation] [Post-graduation] [Doctorate]

Additional/Supplementary Qualification/Training

b) Subject/Specialisation at graduation & above level.

Discipline at Graduate Level -----

Discipline at Post-graduate level -----

Specialisation (if any) -----

1.6 Teaching Experience in years -----

1.7 Current Emoluments -----

2. What was the mode of selection for your current job?

Written Test and Interview []

Interview only []

Academic Qualification []

On Deputation from Govt./Public Sector/Private Sector []

Any Other (Pl. mentioned) []

3. Do you feel that the students take interest in the classes? [Yes] [No]

- If no, mentioned reasons.
4. Do you find the course content sufficient to meet the requirement of the subject course? [Yes] [No]
- If no, please mention changes
- | | | |
|--|---|---|
| Updating syllabus | [|] |
| More reading material | [|] |
| More practical exposure | [|] |
| Lecture by experts | [|] |
| More interaction between teachers and students | [|] |
| Any Other (Pl. mention) | | |
5. Do you think that students will be able to get job after passing these course ? [Yes] [No]
- If no, please give reasons
- | | | |
|---|---|---|
| Indequate infrastructure for the course | [|] |
| Course not meeting market demands | [|] |
| Poor quality of students | [|] |
| No campus recruitment | [|] |
| Employers unaware of the courses | [|] |
| Any Other (Pl. mention) | | |
- If yes, where are the job opportunities available?
- | | | |
|-------------------------|---|---|
| Government | [|] |
| Public Sector | [|] |
| Autonomous | [|] |
| Private | [|] |
| Self/Family | [|] |
| Any Other (Pl. Specify) | | |
6. What improvements do you suggest for the course?
- | | | |
|--|---|---|
| More infrastructure like Library/Laboratory facilities | [|] |
| More practical classes | [|] |
| Apprenticeship after the course | [|] |
| More teaching hours | [|] |
| More theoretical knowledge | [|] |
| Any Other, (Pl. mention) | | |
7. Do you observe any constraints for girl students to undergo this course? [Yes] [No]
- If yes, please specify the constraints.

SCHEDULE-III

**A Study on “Evaluation of Vocational
Education Scheme of UGC”**

**Schedule
For
Students Undergoing Vocational Education**

**Institute of Applied Manpower Research,
Indraprastha Estate, Ring Road,
New Delhi-110002**

A Study on “An Evaluation of Vocational Education Scheme of UGC”

Questionnaire III To be canvassed among Students undergoing Vocational
Education at under Graduate Level

1. Identification Particulars

- 1.1 Name -----
1.2 Age -----
1.3 Sex -----
1.4 Address of the Institution -----

1.5 Name of the Course Pursuing -----

2. What Motivated you to go for Vocational Education Course?

- Job Prospects []
For acquiring skills needed for self employment []
For participating in family enterprise []
Any other (Pl. mention)

3. Do you think that you will be able to get job relating to your vocational course after passing out from here? [yes]
[No]

3.1 If yes, What sort of job you are expecting?

- Govt. []
Private []
Autonomous []
Self or Family []
Any Other (Pl. mention)

8. Do you think that the teaching facility is well equipped to impart the skill required for the vocational course? [Yes] [No]

If no, please mention the shortcomings.

Absence of teachers []

Teachers lacking the requisite knowledge []

Teachers not willing to take classes []

Non-availability of qualified teachers []

Any Other (Pl. mention)

9. Do the course contents relate to local conditions and needs? [Yes] [No]

If no, suggest ways to improve the course for local conditions.

Field experience []

Imparting knowledge about local needs []

Knowledge of local resources and their commercial use []

Training in modernising local industries []

Any Other (Pl. mention)

10. Any other suggestions – regarding the improvement of the course.

SCHEDULE-IV

**A Study on “Evaluation of Vocational
Education Scheme of UGC”**

**Schedule
For
Pass-outs from Vocational Education
Institutions/Colleges**

**Institute of Applied Manpower Research,
Indraprastha Estate, Ring Road,
New Delhi-110002**

A Study on “An Evaluation of Vocational Education Scheme of UGC

Questionnaire IV : To be canvassed among the pass-outs from Vocational Education Institutions/Colleges

1. Identification Particulars

1.1 Name -----

1.2 Name of the Institution last attended -----

1.3 Sex : Male [] Female []

1.3 Please give the details of the exam passed

Degree	Subject	Year of passing	Division/ Grade	Name of the University

2. Activity Status

2.1 Having a paid job []

2.2 Working as self-employed in own or family enterprise []

2.3 Unemployed and looking for job []

2.4 Unemployed but not looking for job []

2.5 Housewife []

2.6 Any Other (Pl. specify)

For Employed

3. Details of present employment

3.1 Designation -----

3.2 Name of Organisation -----

3.3 Main activity of the organisation -----

3.4 Total number of employees in the organisation -----

Less than 10 []

Between 10 to 30 []

Between 30 and 50 []

Above 50 []

3.5 Kind of job

Private []

Government []

3.6 Current Status of the job

Temporary []

Permanent []

3.7 Monthly Emoluments last drawn Rs.-----

3.8 Main duties (e.g. production/marketing/services/assembling etc.)

3.9 Are they related to the Vocational Course you attended? [Yes] [No]

4. How did you obtain the present job?

Through campus recruitment []

By written test and interview []

Interview only []

Based on previous experience []

Based on academic qualification []

Any other (Pl. specify)

5. Did you work for any previous organisation/industry? [Yes]
[No]

6. Are you satisfied with knowledge and skill acquired from the vocational course at graduate level? [Yes] [No]

6.1 If no, please give suggestions for improvement in course conduct.

Level	Subject/Specialisation	Suggestions for Improvement

7. While working, do you face any problem in relation to the training you got ?

7.1 If yes, please mention. [Yes] [No]

Practical sessions were not included in the training []

Lack of apprenticeship []

Poor teaching []

Poor infrastructure []

Any other (Pl. Specify)

8. For Self/Family Employed

8.1 Are you self employed/participating in the family enterprise?

Self employed [] Participating in Family enterprise []

8.2 If employed, please describe the area of activity -----

- 8.3 Location Rural [] Urban []
- 8.4 Name of the supporting agency -----
- 8.5 Financial assistance received if any during the last financial year. -----

9. For Unemployed

9.1 Area you looking for a job? [Yes] [No]

9.2 If yes, please mention why you want to take up a job.

Presently unemployed []

Inadequate salary in the present job []

Loss in Family business/enterprise []

Not able to start my own enterprise []

House wife and needs more income

Any Other (Pl. mention)

9.3 If no, please answer why you are not interested in a job

Inadequate Salary []

Wants to look after family properties/business enterprise []

Want to start my own enterprise []

House wife []

Any other (Pl. mention)

9.4 Are you registered with any Employment Exchange? [Yes] [No]

Duration of unemployment Less than a year

Less than one year []

1-2 years []

More than 2 years []

9.5 Are you willing to accept employment?

a) **Boundary Specific**

i) Only within your home state []

ii) Anywhere in the country []

b) Ownership Specific

- i) Govt. Organisation []
- ii) Private Organisation []
- iii) Public Sector []
- iv) Autonomous []

c) Location Specific

- i) In Rural Areas []
- ii) In Urban Areas []

9.5 What is your salary expectation? Rs. -----

For employed, unemployed & self employed

10. Do you feel the course has been useful? [Yes] [No]

10.1 If no, what general improvements do you suggest for vocational courses?

More practical sessions []

Improvements in teaching []

Inclusion of apprenticeship []

Campus Recruitment []

Any other (Pl. specify)

11. How do you think that the pass-outs can find the requisite job?

SCHEDULE-V

**A Study on “Evaluation of Vocational
Education Scheme of UGC”**

**Schedule
For
Experts/Key Informants**

**Institute of Applied Manpower Research,
Indraprastha Estate, Ring Road,
New Delhi-110002**

A Study on “An Evaluation of Vocational Education Scheme of UGC”

Questionnaire V: To be canvassed among the experts/Key informants (Vice-Chancellors, Professors, Women’s activists, entrepreneurs, NGO Workers etc.)

1. Identification Particulars

1.1 Name -----

1.2 Address -----

1.3 Designation* -----

1.4 Department -----

1.5 Organisation* -----

- Retired persons or those who are not working on consultancy basis may indicate their previous organisation/Institution.

2. In view of the changes in the socio-economic and technological spheres do you think that the curriculum of vocational education scheme should include more courses than the present one implemented by UGC at the under graduate level on the basis of Dhar Committee Report?

[Yes]

[No]

If the answer is yes, please mention the courses.

Discipline	Courses
i) Arts, Humanities and Social Sciences	a b c
ii) Commerce and Economics	a b c
iii) Sciences	a b c

- iv) Engineering Technology
 - a
 - b
 - c

- The name of vocational streams and subjects are given in the Annexure.

2.1 Please indicate the graduate course/subject taught in degree colleges at the university level if any which has become redundant/decaying as a result of technological change and globalisation and please suggest ways to improve the courses according to the market needs.

Redundant Course/Subject	Suggestions for Improvement

3. Please indicate vocational courses to improve the skill formation and modernise our traditional sectors like fisheries, textiles, leather goods, coir etc.

Vocational Courses	Suggestions for Modernisation and Skill Formation

4. Do you think that vocational training can be given for modernising carpentry, masonry, jewelry, and other related fields?

4.1 If yes please suggest ways and means to conduct such courses.

Vocational Courses	Ways and means for conducting courses

5. In Agriculture, Dairy, Veterinary and other primary sectors, do you think that vocational training has been useful?

[Yes]

[No]

5.1 If no, please suggest different methods to improve the courses

Courses	Suggestions for Improvement

6. Have the vocational courses helped students to set up their own small enterprises?

[Yes]

[No]

6.1 If no, please suggest reasons.

Lack of financial support from banks and other lending institutions []

Lack of entrepreneurship on the part of students []

Bureaucratic delays []

Lack of market demand []

Lack of market demand []

Lack of infrastructure like power, water etc. []

Not acquiring skill from Vocational Institution []

Any other (Pl. mention)

7. Do you think that the implementation of vocational courses at a large scale can check rural-urban migration?

[Yes]

[No]

7.1 If no, please give reasons.

In Industrialised Societies, People tend to -----
move from rural to urban areas to get
employment.

Vocational courses do not ensure a job -----
in rural areas

People are lured because of more -----
facilities in towns and cities.

Vocational courses do not pertain to -----
local needs and aspirations.

Any other (Pl. mention) -----

8. What measures and means do you suggest for making vocational courses more useful for local conditions and meeting popular aspirations.

Local needs and popular aspirations	Suggestions

9. Do you think that unemployed women will benefit according to the market needs in a big way if they undergo vocational training in the current scenario?

[Yes] [No]

If no, please suggest ways to improve the employment potentials of women through vocational courses.

Courses	Suggested Improvements

10. Do you think there are constraints on the part of women to undergo these courses?

[Yes] [No]

If yes, please specify the constraints and suggest measures to overcome.

Constraints	Measures to overcome constraints

11. Do you think that details, tribals and other marginalised communities can be given employability through vocational courses in accordance with the developments in the industrialised world and market needs.?

[Yes]

[No]

If yes, please give suggestions for introducing the ocurses.

- 1.
 - 2.
 - 3.
12. Do you think that vocational education scheme can make use of new revolution in information technology (IT) and introduce courses related to advanced computer applications, internet usage, E-commerce, medical transcriptions and other related fields.

[Yes]

[No]

If yes, please give suggestions for introducing the courses and if possible please name the courses which can be introduced for the above subjects.

Suggestions	Name of the course

13. Please give overall suggestions and comments on the ongoing vocational courses and ways to improve their efficiency and the employability suited to the demands of the labour market and at the same time enabling skill formation suited to local conditions.

ARTS, HUMANITIES AND SOCIAL SCIENCES

1. Functional Hindi
2. Functional Sanskrit
3. Communicative English
4. Archaeology & Museology

COMMERCE AND ECONOMICS

1. Principles & Practices of Insurance
2. Actuarial Science
3. Office Management & Secretarial Practice
4. Tax Procedures & Practices
5. Foreign Trade Practices & Procedures
6. Tourism and Travel Management
7. Advertising, Sales Promotion & Sales Management
8. Computer Applications

SCIENCE

1. Industrial Chemistry (Seven streams)
2. Food Science & Quality
3. Clinical Nutrition Dietetics
4. Industrial Microbiology
5. Bio-technology
6. Biological Technique & Specimen Preparation
7. Seed Technology
8. Sericulture
9. Industrial Fish & Fishery
10. Instrumentation
11. Optical Instrumentation
12. Geo-exploration & Drilling Technology
13. Mass Communication Video Production
14. Still Photography Audio Products

ENGINEERING & TECHNOLOGY

1. Electronic Equipment Maintenance
2. Computer Maintenance
3. Electrical Equipment Maintenance
4. Environment & Water Management
5. Rural Technology
6. Automobiles Maintenance
7. Refrigeration & AC Maintenance
8. Construction Tech. & Management
9. Manufacturing Process