SOCIO-ECONOMIC EMPOWERMENT THROUGH ICT

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Abstract *— Human resource development despite fluctuating economic prosperities has been taking place in India, how much ever gradually, in many states. While the formal Government sector continues to play an important role, it is the growth of private participation in providing affordable computer education, especially to the socially and economically under-privileged that appear to have provided the impetus for growth in qualified professionals. This paper argues that education and training in computer programme and packages at subsidized rates is likely to increase the capabilities for job-seeking, which in turn would change the socio-economic structure of the households whose members have been the beneficiary of such programme. The results of this study, which compares two Indian states representing the economically prosperous and under-developed, points out that ICT education appears to have tremendous scope to enhance poor people's opportunities, and be a major source of empowerment of people – especially the socially and economically backward - in India.*

Index Terms — Empowerment, ICT, Education, India.

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1 Introduction

It is widely recognized that one of the vital determinants of competitiveness in developing countries is the skills of the workforce at all levels. The effective use of technologies requires skills, and the move from simple to complex technologies requires more, better and more diverse skills. Further, new technologies often call for entirely different skills, both for direct production and services and for the organization of production and for managing knowledge networks. For example, as the momentum surrounding e-commerce increases with more and more people turning to World Wide Web to conduct business transactions, the demand for Web professionals is reaching a feverish pitch. The need for increased skills rises with the level of development, but even the least developed countries have to improve their human capital base if they are to grow and prosper. Traditional models of competition based on low costs and prices are being replaced by competition driven by quality, flexibility, design, reliability and networking. This change is not only in markets for advanced manufacturers but also in day-to-day use consumer goods like clothing, footwear and food products.

The use of new technologies, especially information-based technologies, calls for more, better and newer kinds of skills. The reason for this stems largely from both technological factors, as well as organizational factors. These skills are subject to constant change. Consequently, the education and training system has to upgrade skills constantly in line with emerging needs. ILO [1998 p.47] observed that the demand for professionals and technicians has increased in all countries, as their analytical, cognitive and behavioural skills equip them better to adapt to more sophisticated technology. In addition, the increased importance of networking between firms (and between firms and technology institutions) for competitiveness, requires specific “communicative” skills. A recent study [Tomlinson, 1999] shows how these skills are enabling skilled workers in the UK to move into knowledge-intensive sectors more readily than worker without such skills. Skilled and experienced individuals can provide an economy with greater technological capabilities for fostering growth in output and social welfare [Bhalla, 1996].

In a world of fast changing technology, however, a base of formal education is necessary but nor sufficient for efficiently using technologies. Technology-specific skills and learning are as much important as the formal education is. Educational Institutions in both developed and developing countries tend to cater to this requirement. Increasing the skill content of the potential work-force open up a wide range of avenues to them. Better capabilities, especially in micro-electronic applications and use of information technology, for job seeking is expected to bring about a change

in the socio-economic structure of the society. This is especially when such skill formation efforts, in developing countries, are directed to socially and economically underprivileged. This study aims to analyse the impact of subsidized computer education on the Socio-Economic structure of the beneficiary.

1.2 ICT, Human Capital Formations and Socio-Economic Structure

As the industrial sector grows more complex and sophisticated, the challenge of providing better and more appropriate human capital becomes more important. In the process, therefore, relevant institutions develop. However, given the complexity of the information involved, the long-term nature of skill investment and the inherent uncertainties and externalities, there can be widespread market failures in human capital formation. As a result, markets can fail to provide properly an economy's skill needs and to keep with its changing profile. There is a clear need for policy support from the government. Lall (2001) argues that, surprisingly, it is the richest countries, with the most developed skill bases, that worry most about human capital problems. Human development despite faltering economic development has been taking place in India, how much ever gradually, in many states. Kerala appears to be an exception to this, especially in achieving human development (Lieten, 2002). While the formal Government sector continues to play an important role, it is the growth of private participation in providing affordable computer education, especially to the socially and economically under-privileged that appear to have provided the impetus for growth in qualified professionals. There is a broad consensus of appreciation on the role of Non-Governmental Organizations, Private Charitable Trusts and Educational Investment of Business Houses in fostering the growth of supply in computer educated and qualified personnel. This consensus emerged from the experience of market failure situation in providing quality educational services in developing countries.

In the literature on education and training system in developing countries, it is well recognized that market failure can take place due to (a) information gaps and uncertainty where the individuals may not know of the future value of investments in education and training or of particular skills, and they may not know what skills are needed in future, (b) even if the individuals can forecast the probability of getting returns on skill investments, they may prefer more certain short-term returns to available jobs, (c) individuals may not be able to finance their learning costs and foregone earning, especially with their inability to afford two square meals a day and (d) high costs of educational services provided, especially in the case of private institutions and (e) danger of bureaucratic and rigid management especially in a publicly funded training institution. As a result, private charitable

trusts have a large role to play in imparting training and knowledge, especially for socially and economically underprivileged.

1.3 Scope, Data and Methodology:

(1) The study proposes to take up the case of subsidized computer education programme of a particular Trust Organization, and aims to analyse the socio economic impact of such subsidized computer education programme, especially among the socially and economically under-privileged.

(2) The analysis would be carried out on the basis of information given in the enrolment form available with the training centres as well as the response of the beneficiaries.

(3) The study would compare the socio economic impact of this programme in select centres in two States of India: namely Maharastra and Rajasthan

As mentioned in the earlier section, education and training in computer programme and packages is likely to increase the capabilities for job-seeking, which in turn would change the socio-economic structure of the households whose members have been the beneficiary of such programme. The analysis has been carried out on the basis of information given in the enrolment form available with the training centres as well as the response of the beneficiaries. We visited all the currently operational centres in the States of Maharastra and Rajasthan and collected details with respect to age, sex, educational attainment, occupational status and family income from the Enquiry cum Admission forms made available to us. Details about the course curriculum, enrolment, drop-out etc., were collected from the centre in charge (CiC).

The organisation began working on this mission in 1992, when they decided to realise its social objective of working towards the fulfilment of the pressing need for vocational training. With the dawn of the Computer Age, it has become increasingly difficult for the less privileged to cope with changing trends, attitudes and employment demands. In order to succeed in today's highly competitive work environment, at least a certain level of computer training is essential. With a country engulfed in poverty, reaching out to more and more youth would involve huge investments in terms of infrastructure, faculty and other facilities. The Foundation has already taken steps to achieve this mammoth task. It has associated itself with various organisations. The Foundation offers a diploma course in the Basics of Computers, with programmes in different languages and platforms. It also offers short-term courses which trains them for job opportunities in the IT industry. The Foundation regularly updates its courses according to IT requirements of the industry.

Today, the Foundation not only has centres in all the metropolitan cities, but also in semi-urban and impenetrable rural areas including disturbed states like Jammu and Kashmir and Assam. Several corporate placement divisions seek employees from among the Foundation's fold. The Foundation

has a full-time experienced faculty that equips students with the ability to handle various computer-oriented jobs. Its courses are structured to give the students hands-on experience. The students also have access to a well-equipped library. The Foundation is now looking at tying up with other national and international organisations so as to enhance its credibility and offer students further recognition in the job market.

For enrolment, preference is given to students with a gross annual income of below Rs.30, 000. At the end of the training period, the Foundation helps the students to get better job opportunities in the IT industry. Since its inception, thousands of students have availed of the basic and advanced computer courses offered by the Foundation at the centres spread across every corner of India. They have found jobs in technology-savvy companies and have found themselves a respectable place in Society.

A brief review of the literature on the impact of public support to education in both developed as well as developing countries is provided in Section 2 of the study. In section 3, a profile of the computer training centres in presented. Section 4 deals with socio-economic assessment of the beneficiaries of the computer-training programme, and section 5 presents the summary of findings of the study.

2. Literature Survey:

This section attempts to provide a brief survey of literature relating to the evaluation of subsidized education facilities in different parts of the world. Public support to education, especially to the socially and economically under-privileged is not uncommon in most developing countries. As mentioned earlier, developed countries, with the most developed skill base, that appears to worry most about human capital formation. Developing countries have always been a path dependent on this. However, recent experiences of Asian tigers reveal that those countries, which have built strong human capital, are the ones that are able to grow at a faster rate than the others. Studies on evaluation of poverty alleviation programmes have also pointed out that information and communication technology [ICT] could be a major route through which countries could expedite eradication of poverty. Computer education, which is an integral part of the information technology development, appears to have tremendous scope to enhance poor people's opportunities by improving their access to markets. Access to markets can make a small beginning and be a part of the development initiatives in a world of information revolution and participatory economic development.

2.2 Studies on Developed Countries:

In this section a brief review of the studies that have analysed the impact of governmentally provided subsidy on education and learning is presented. Shuanglin Lin (1998) examines how government education spending and time-spent learning interact to determine the level of human capital in an overlapping generations' model. An increase in education spending will reduce the investment in human capital if the interest rate effect dominates the productivity effect, while it will increase the investment in human capital if the interest effect is dominated by productivity effect. Julie-Anne Cronin (1997), in the context of the Hope Scholarship tax credit and tuition tax deduction considered the interaction of the tax subsidy proposals with the Pell Grant program, shows that although many students from low-income families would not benefit from the non-refundable tuition credit, some would benefit from the deduction and most would be winners under the proposed Pell expansion. The paper also estimates an expected long-run enrolment response to the proposals to be around 150,000 to 1.4 million additional students, with the likely response closer to the low end of this range.

Philip A. Trostel, 1993 carried out a study on the justification of educational subsidies even in the absence of market imperfections. Trostel shows that subsidizing education lowers the private cost of monetary investments in human capital. This naturally encourages investments in human capital, and changes the mix of these investments by stimulating monetary investments much more than time investments. Trostel demonstrates that while income taxation creates distortions in human capital investment, subsidies on education (under the simplifying assumption that changes in education subsidy are financed by changes in lump sum transfers) is welfare improving. It is so because, subsidizing education reverses the tax distortion away from investment in human capital and the tax distortion in the mix of human capital investments away from goods inputs toward time inputs. He concludes that by counteracting both the said distortions of income taxation and making the tax system less costly, subsidies can be efficient up to a fairly high rate (roughly equal to the cumulative marginal tax rate on income).

Elizabeth M.Caucutt and Krishna B. Kumar (2000) focused on a simple dynamic general equilibrium framework, which featured heterogeneity in income of parents and academic ability of students plus a government that is equipped with a simple tax and subsidy scheme. Secondly the model is calibrated to US economy, and experiments are conducted to study the effect of education policies. The paper concludes that a simple subsidy on education can guarantee equality of opportunity, but only at the expense of a decrease in the efficiency of utilization of educational resources. Thus the welfare gain is minimal. However, if the government has the political will to use

any available signal on ability and provide merit-based aid, it can increase this efficiency with little decrease in welfare.

These conclusions appear robust with the addition of ability in the production function. They conclude that any further increases in higher education subsidies to bridge the "enrolment gap" in the US may not be warranted. However, education subsidies may be a potent tool for countries that are caught in a development trap. A sufficient level of subsidy can cause the economy to emerge from the trap and also allow the gains to be realized in a timely manner.

2.3 Developing Country Experience:

Gladys Lopez-Acevedo (1999)'s survey focuses on national level rural and urban areas. The survey design was stratified, multistage and clustered. The final sampling unit was the household and all the members within the household who were interviewed. Information was collected on income and consumption, individual characteristics and household characteristics. Data regarding educational expenditures were collected from the Ministry of Education, in order to calculate the unit costs Lopez and Salinas show that public spending on tertiary education in Mexico is strongly regressive, benefiting mainly the non-poor in urban areas. To give the poor a chance at higher education, the authors recommend student loan programs or means-tested financial aid and scholarship programs. Such programs are rarely devoid of subsidy but are preferable to the direct, cost-free provision of services because the subsidy is targeted more closely to the source of market failure, viz. market failures in the financial sector, which limit the availability of long-term financing for higher education

Shultz [2001] evaluates how the Progresa Program, which provides poor mothers in rural Mexico with educational grants, has affected enrolment. The program targets geographically and economically the poor relatively immobile, rural villages of Central and South Mexico The program is seen to reduce the economic inequality in school enrolments within the Progresa localities compared to non-Progresa localities. The impacts are statistically significant from grades 4 through 6. The estimated internal rate of return to the educational grants provided by the program is 8% per year in real terms. Though this is a moderate rate of return, Shultz argues that since it is concentrated on the poor and has the objective of reducing current poverty by raising current consumption levels of this group, so it should not be regarded as a program designed only to foster human capital investments. It is true that for a majority of the poor rural families whose children would have attended school without the program's educational grants, the Progresa outlays are simple income transfers or a rent, which does not change their behaviour. But for the one in ten who is induced by the program subsidy to enrol their child in school, they may experience a decrease in their children's

work in the market labour force or in home production. However, the magnitude of the response is modest and cannot offset more than a fifth of the total consumption gains associated with the program grants. Richard J.Coley, John Cradler and Penelope K. Engel (1997)'s report focuses on the use of computers in US schools. It is a comprehensive report and among other issues it dwells on the effectiveness of using information technology in schools. Citing studies of James Kulik (1990), J.D. Fletcher, Software Publishers Association and their own research, the report observes: "With respect to achievement, positive effects were found for all major subject areas, in preschool, and for both regular education and special needs education. Students attitudes toward learning and student self concept were both found to be increased consistently in a technology-rich environment across the studies included." Subsidiary benefits include improvement in students' motivation and attitudes about themselves and about learning, higher attendance rates in school, better interest and involvement in experiments and explorations, etc.

Rasmussen [2002] examines the link between ICT and Poverty Reduction. He identifies the possibilities and pitfalls in this link and points out that many possible ICT projects lead (indirectly) to people's participation [defined in terms of "the ability of people to take part in public processes and form an active part of society"]. More specifically, he argues that knowledge in ICT can be an "enabler" for people's participation.

Vinayak [2002] attacks the widespread belief that ICT cannot be used as a direct means of poverty reduction. Through examples from the daily work of SEWA he showed how this direct link is possible. An example was customized software that saved time and money, and through a 100% graphical interface enabled the illiterate to use the software. SEWA has also used ICT for communication purposes most recently to create a direct video link from SEWA to the Ministry of Agriculture.

The real issue that emerges from these studies on developing countries is that efforts should be made to close the digital gap through incorporating ICT directly in development work – not just include ICT in other projects. The solution is to move from a very narrow ICT focus to a holistic view. In this broader view ICT is the link to other issues: Human capacity, policy, enterprise, content and infrastructure. The holistic view also makes it necessary to expand focus from macro-economic dynamics to include locally embedded approaches. Many studies also emphasized that the private sector/non-governmental organisation and voluntary agencies, apart from the government, are all very important players in reaching these goals.

To sum up, it could be mentioned that on the whole computer education appears to have tremendous scope to enhance poor people's opportunities. These opportunities are usually translated in the form of access to markets, and market access could be a part of the development initiatives in a

world of information technology and could make the development initiatives inclusive. Provision of subsidised computer education could, therefore, be a major source of empowerment of people – especially those belonging to the socially and economically backward in a developing country like India. However, the models specified and tested in these research studies are not directly applicable in the present study. This is largely because of the absence of time series data on most of the socio-economic impact variables, of the beneficiaries of the training programme that could be analysed. Efforts have been made to analyse the available information, using simple statistical techniques, in sections 3 and 4 to examine the impact of the subsidized training on the society at large. The results of the analysis could be of considerable use to the foundation and the policy makers and also provide directions for future research.

3. Characteristics of the ICT Training Centres

This section describes the characteristics of the Sterlite Computer Training Centres located in the states of Maharastra and Rajasthan. There are 34 running centres in theses two states put together: 17 each in Maharastra and Rajasthan. The project team visited all the 34 centres and collected data pertaining to the structure of these training centres, basic amenities, infrastructure facilities, location, number of PCs and the utilisation of the facilities. The region-wise as well as centre specific details are presented in this section. While section 3.1 deals with the centres in Maharastra, in section 3.2 an analysis of the centres of Rajasthan is presented. The centres are arranged in alphabetical order for the respective states and the analysis of the facilities and quality of training provided.

3.1 Centres in Maharastra:

This section provides a brief description of the structure and facilities available in the computer training centres in Maharastra. The 17 computer training centres in Maharastra are located in the following places: Akola, Aliba, Amravati, Gadge Nagar, Amravati, Rukmini Nagar, Aurangabad, Dhule, Gargoti, Kolhapur, Latur, Nagpur, Pune, Ratnagiri (Hostel), Ratnagir, Tambat Ari, Sangli, Satara, Solapur and Yavatmal. A brief description of the structure of these centres is given in section 3.1.1 while section 3.1.2 provides an assessment of the facilities and training in these centres.

3.1.1 Structure of Centres in Maharastra:

In this section we provide an assessment of all the centres described above that are located in Maharastra. The assessment is carried out on the basis of factual information about the existence and functioning of computers, location of the centres, infrastructure index , dropouts, placements and capacities and their utilisation.

Table 1 Structure of Computer Training Centres: Maharastra

Centre	Year of Establishment	Number of Instructors	Number of Female Instructors	Number of PCs	Number of Working PCs
Akola	1995	4	1	6	6
Alibagh	2001	4	4	5	4
Amravati, Gadge Nagar.	2000	3	1	5	5
Amravati, Rukmini Nagar	1997	4	2	10	10
Aurangabad	1996	2	0	5	5
Dhule	2000	2	0	5	5
Gargoti	2000	3	0	4	4
Kolhapur	1998	3	2	6	5
Latur	2001	2	0	5	4
Nagpur	2002	2	0	9	9
Pune	2000	1	1	6	6
Ratnagiri, (Hostel)	2000	2	2	4	2
Ratnagiri, Tambat Ari	1997	5	3	10	10
Sangli	2000	3	1	5	5
Satara	2001	3	1	5	5
Solapur	2000	3	1	7	7
Yavatmal	2000	2	0	9	9

Table 2 Location of and Infrastructure Facilities in the Training Centres: Maharastra

Centre	Location	Infrastructure Index (On a 10 Points Scale)	Percentage of Students In Contact With The Faculty
Akola	M	6.25	2%
Alibagh	M	6.25	20%
Amravati, Gadge Nagar.	R	6.25	10%
Amravati,Rukmini Nagar	M	6.25	0
Aurangabad	R	6.25	15%
Dhule	R	7.5	5%
Gargoti	M	3.75	10%
Kolhapur	M	5	10%
Latur	M	3.75	20%
Nagpur	R	6.25	5%
Pune	O	6.25	15%
Ratnagiri, (Hostel)	R	2.5	70%
Ratnagiri, Tambat Ari	M	6.25	30%
Sangli	R	6.25	40%
Satara	M	6.25	5%
Solapur	M	6.25	10%
Yavatmal	R	7.5	20%

Note 1. **M** = Market; **R** = Residential; **O** = Official

Note 2. Construction of Infrastructure Index: To construct the infrastructure index we assign 1 for the availability and 0 for the non-availability of the basic infrastructure facilities in terms of printer, UPS, CVT, telephone, internet, toilet facilities, drinking water and power supply. After adding up the score we divide by 8 and multiply by 10 to get the index on a 10 points scale.

Definitions: The three different localities are defined as follows:

Market (M): A locality with a concentration of shops and commercial establishments.

Official (O): A locality with a concentration of government and/or private sector offices.

Residential (R): A locality with a concentration of privately owned houses, private or cooperative housing complexes and colonies.

Table 1 describes the structure of the computer training centres in Maharastra. Four of these 17 centres have been in operation from the past five years. Two centres have 10 PCs each and the average number of PCs is about 5 and most of them are in good working condition. However there are a number of centres which do not have a female instructor.

From table 2 it can be observed that more than half the centres are located in market places in Maharastra, while a third of them being in residential areas. Except Gargoti and Kolhapur, all others score 60% and above in infrastructure index. There is lot of scope for improvement on this front in most centres. In most centres, very low percentage of past students is in contact with the faculties. This may be because they keep changing and/or poor communication skills of the instructors.

3.1.2 Assessment of Centres in Maharastra:

With respect to dropouts (Table 3), Sangli tops the list followed by Alibag and Satara. Dhule and Nagpur report zero drop outs which is a commendable performance. Yavatmal follows them with a low dropout rate of less than 8%. Aurangabad tops the list of number of students placed by the centres. It may be noted that Ratnagiri (Hostel) centre, which is now located outside the hostel due to serious differences of opinion between the warden and the Sterlite administration also does well by placing 20 students. On the whole a very low percentage of students are able to find jobs at the end of the training, a reflection of the course taught and its usefulness commercially.

Table 3 Dropouts and Placement: Maharastra

Centre	Enrolment Rate (%)	Drop Out Rate (%)	Number of Students Placed By The Centre	Students In Contact With The Faculty (%)
Akola	5	31.67	0	2
Alibagh	18.77	50.96	5	20
Amravati, Gadge Nagar.	20	16.67	9	10
Amravati, Rukmini Nagar	34.88	29.07	0	20
Aurangabad	17.44	39.53	27	15
Dhule	72	0	0	5
Gargoti	8.75	11.95	2	10
Kolhapur	14.65	18.6	20	10
Latur	26.88	22.58	0	20
Nagpur	69.01	0	0	5
Pune	6.82	55.11	1	15
Ratnagiri, (Hostel)	12.4	26.45	70	70
Ratnagiri, Tambat Ari	6.88	12.57	15	30
Sangli	13.91	58.61	25	40
Satara	16.22	45.05	1	5
Solapur	11.11	25.99	5	10
Yavatmal	3.69	7.69	15	20

Table 4 Capacities and Utilisation: Maharastra

Centre	Installed Capacity	Effective Capacity	Capacity Utilisation Rate (%)
Akola	144	144	10.42
Alibagh	120	120	40.83
Amravati, Gadge Nagar.	120	120	20
Amravati,Rukmini Nagar	240	240	37.5
Aurangabad	120	120	25
Dhule	120	120	15
Gargoti	96	96	31.25
Kolhapur	144	120	52.5
Latur	120	96	26.04
Nagpur	216	216	22.69
Pune	96	96	12.5
Ratnagiri, (Hostel)	96	48	62.5
Ratnagiri, Tambat Ari	240	240	40.83
Sangli	120	120	35
Satara	120	120	30
Solapur	168	168	33.33
Yavatmal	216	216	5.56

Note:

Installed Capacity = (Number of PCs) × 2 × 12 if number of instructors > 1
= (Number of PCs) × 2 × 8 if number of instructors = 1

Effective Capacity = (Number of Working PCs) × 2 × 12 if number of instructors > 1
= (Number of Working PCs) × 2 × 8 if number of instructors = 1

$$\text{Capacity Utilisation} = \frac{\text{Number of Students Enrolled}}{\text{Effective Capacity}} \times 100$$

Capacity utilisation has been one of the major concerns of the Foundation since inception. It is evident (from Table 3) that in only four out of the 17 centres register a capacity utilisation of 40% and above. Ratnagiri (Hostel) tops the list with 62.5% capacity utilisation and Yavatmal has the lowest capacity utilisation rate of 5.56%. Eleven out of 17 centres are at less than one third of their effective capacity. The ratio would be extremely low if calculated in terms of installed capacity.

3.2 Centres in Rajasthan:

In this section we describe the structure and facilities available in the computer training centres in Rajasthan. The 17 computer training centres in Rajasthan are located in the following places: Alwar, Beawar, Bharatpur, Kotwali, Bharatpur, Mandi, Bikaner, Chirawa, Chomu, Jaipur, Bajajnagar, Jaipur, Murlipura, Jaipur, Shastrinagar, Jhunjhunu, Jodhpur, Kishangarh, Mukundgarh, Reengus, Sri Ganganagar and Udaipur. A brief description of the structure of these centres is given in section 3.2.1 while section 3.2.2 provides an assessment of the facilities and training in these centres.

3.2.1 Structure of Centres in Rajasthan:

In this section we provide an assessment of all the centres described above that are located in Maharastra. The assessment is carried out on the basis of factual information about the existence and

functioning of computers, location of the centres, infrastructure index, dropouts, placements and capacities and their utilisation.

In contrast to Maharastra, Rajasthan has very few female instructors (only 4 in all) (Table 5). Also the total number of instructors in a centre in Rajasthan is not more than two. A practice not followed in Maharastra. This puts a greater burden on the existing number of instructors especially when the number of PCs is 8 to 12. Very few centres have reported non-working of too many PCs.

Table 5 Structure of Computer Training Centres: Rajasthan

Centre	Year of Establishment	Number of Instructors	Number of Female Instructors	Number of PCs	Number of Working PCs
Alwar	2001	2	0	7	6
Beawar	2002	1	0	3	3
Bharatpur, Kotwali	2001	2	0	5	3
Bharatpur, Mandi	1997	2	1	7	7
Bikaner	1998	2	0	8	8
Chirawa	2002	1	0	3	2
Chomu	2000	1	0	2	2
Jaipur, Bajajnagar	1996	2	0	12	12
Jaipur, Murlipura	2001	2	0	4	4
Jaipur, Shastrinagar	2000	2	0	5	5
Jhunjhunu	2001	2	0	5	4
Jodhpur	1998	1	1	5	4
Kishangarh	1999	1	0	5	3
Mukundgarh	2002	1	1	3	2
Reengus	1996	1	0	3	3
Sri Ganganagar	1999	1	0	8	7
Udaipur	1997	2	1	4	3

It can be observed from Table 5 that most centres in Rajasthan are located in residential areas, which provide easy accessibility. Less than a third is located in market areas. On the infrastructural facilities, nine out of seventeen centres score above 60%. Alwar, Bharatpur and Jaipur, Bajajnagar, tops the list with 7.5. However, four centres score very poorly on infrastructure. In the centres located in Jaipur, most students are in touch with the faculty, whereas, in less developed places, as against the expectations, less number of past students are in touch with the instructor.

Reengus reports the highest dropout rate, followed by Kishangarh, Jodhpur and Udaipur. This may be due to poor infrastructure and ineffective teaching. Strangely, Kishangarh reports the maximum number of placements in both the states put together. Udaipur also follows the same pattern. This could be due to the inflated reporting of placement by the centre in charge of the two places. In contrast, Bharatpur, Mandi, which is one of the oldest centres, has been doing well in placements.

Table 6 Location of and Infrastructure Facilities in the Training Centres: Rajasthan

Centre	Location	Infrastructure Index on a 10 Points Scale	Percentage of Students In Contact With The Faculty
Alwar	R	7.5	30%
Beawar	M	3.75	0
Bharatpur, Kotwali	M	5	2%
Bharatpur, Mandi	M	7.5	10%
Bikaner	R	6.25	30%
Chirawa	M	2.5	0
Chomu	R	2.5	40%
Jaipur, Bajajnagar	R	7.5	20%
Jaipur, Murlipura	R	5	80%
Jaipur, Shastrinagar	R	6.25	95%
Jhunjhunu	M	6.25	30%
Jodhpur	R	6.25	50%
Kishangarh	R	6.25	25%
Mukundgarh	R	2.5	0
Reengus	R	5	20%
Sri Ganganagar	R	6.25	10%

Note 1. **M** = Market; **R** = Residential; **O** = Official

Note 2. Construction of Infrastructure Index: To construct the infrastructure index we assign 1 for the availability and 0 for the non-availability of the basic infrastructure facilities in terms of printer, UPS, CVT, telephone, internet, toilet facilities, drinking water and power supply. After adding up the score we divide by 8 and multiply by 10 to get the index on a 10 points scale.

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Residential (R): A locality with a concentration of privately owned houses, private or cooperative housing complexes and colonies.

Table 7: Dropouts and Placement: Rajasthan

Centre	Enrolment Rate (%)	Drop Out Rate (%)	Number of Students Placed By The Centre	Students In Contact With The Faculty (%)
Alwar	27.43	17.71	27	30%
Beawar	80	0	0	0
Bharatpur, Kotwali	19.46	28.65	1	2%
Bharatpur, Mandi	19.42	33.66	25	10%
Bikaner	15.5	9.56	60	30%
Chirawa	333.33	0	0	0
Chomu	22.54	36.62	4	40%
Jaipur, Bajajnagar	17.14	11.79	3	20%
Jaipur, Murlipura	79.75	11.39	2	80%
Jaipur, Shastrinagar	23.44	33.59	0	95%
Jhunjhunu	45.45	12.12	1	30%
Jodhpur	9.34	48.64	4	50%
Kishangarh	8.2	57.86	0	25%
Mukundgarh	120	0	0	0
Reengus	20	82.22	0	20%
Sri Ganganagar	31.58	45.39	0	10%
Udaipur	6.98	48.37	50	50%

Table 8 Capacities and Utilisation: Rajasthan

Centre	Installed Capacity	Effective Capacity	Capacity Utilisation Rate (%)
Alwar	168	144	33.33
Beawar	48	48	16.67
Bharatpur, Kotwali	120	72	50
Bharatpur, Mandi	168	168	35.71
Bikaner	192	192	31.25
Chirawa	48	32	93.75
Chomu	32	32	50
Jaipur, Bajajnagar	288	288	16.67
Jaipur, Murlipura	96	96	65.63
Jaipur, Shastrinagar	120	120	25
Jhunjhunu	120	96	31.25
Jodhpur	80	64	37.5
Kishangarh	80	48	75
Mukundgarh	48	32	112.5
Reengus	48	48	37.5
Sri Ganganagar	128	112	42.86
Udaipur	96	72	41.67

Note

Installed Capacity = (Number of PCs) × 2 × 12 if number of instructors > 1
= (Number of PCs) × 2 × 8 if number of instructors = 1

Effective Capacity = (Number of Working PCs) × 2 × 12 if number of instructors > 1
= (Number of Working PCs) × 2 × 8 if number of instructors = 1

$$\text{Capacity Utilisation} = \frac{\text{Number of Students Enrolled}}{\text{Effective Capacity}} \times 100$$

As against poor utilisation of capacities in Maharastra, Rajasthan has a high rate of capacity utilisation in many places (Table 4). Mukundgarh has 112.5% and Chirawa has 93.75% capacity utilisation. Only six out of 17 centres have less than one third capacity utilisation. High capacity utilisation could be due to a large gap between installed and effective capacity, which is mainly due to less number of instructors and number of working PCs.

In sum this section, attempted to provide an analysis of computer training facilities available in the centres surveyed in Maharastra and Rajasthan. The analysis highlights the scope for improving infrastructure facilities and better capacity utilisation. Besides there is a need for increasing the number of female instructors, especially in Rajasthan where the enrolment rate, (of women in particular) depends crucially on the presence of female instructor(s).

4. Socio-Economic Assessment of the Beneficiaries of the Training Programme

In the course of our survey we visited a total of 34 Sterlite Training Institutes (STI), 17 each in Maharastra and Rajasthan. In this section we present a socio-economic assessment economic assessment of the beneficiaries of the four (previously six) months' Diploma in Computer Application (DCA) programme. The information pertaining to age, sex, educational qualification, occupational status and family, discussed here have been collected from the students' Enquiry cum Admission forms. Most centres preserves the forms very neatly although many forms are far from

complete. The columns meant for the centre in charge is more often than not incomplete. In Bikaner, Rajasthan, for instance none of the students have filled up the income column in the students' enquiry cum admission forms. There are some exceptions however. Ratnagiri in Southern Maharastra and Alwar in Rajasthan have maintained their records very well. The analysis carried out in this section is largely based on the assumption that the information provided by the beneficiaries in the form is true to the best of their knowledge.

To carry out the socio-economic assessment of the beneficiaries, we have looked into gender distribution of the **total** beneficiaries, age structure, gender distribution of age structure, educational level, and gender distribution of educational level, income distribution and its gender distribution and occupational status and its gender distribution. The total size of the sample is 5991, of which Maharastra and Rajasthan accounts for 3800 and 2191 sample observations respectively. The sample size has been determined by the number of forms which were available for observation, when we visited the centres, and does not reflect the actual number of beneficiaries of the all the centres put together. The number of forms analysed from different centres in Rajasthan and Maharastra has been tabulated in tables 9.1 and 9.2.

Table 9.1

Centres in Maharastra

Name of Centre	Frequency	Share in the State (%)	Share in Total Sample (%)
Alibagh	260	6.8	4.3
Pune	176	4.6	2.9
Aurangabad	172	4.5	2.9
Nagpur	71	1.9	1.2
Amravati, Gadge Nagar.	120	3.2	2.0
Akola	138	3.6	2.3
Amravati,Rukmini Nagar	259	6.8	4.3
Yavatmal	325	8.6	5.4
Dhule	25	0.7	0.4
Ratnagiri, Tambat Ari	807	21.2	13.5
Ratnagiri, (Hostel)	151	4.0	2.5
Kolhapur	179	4.7	3.0
Gargoti	148	3.9	2.5
Sangli	303	8.0	5.1
Satara	137	3.6	2.3
Solapur	436	11.5	7.3
Latur	93	2.4	1.6
Total	3800	100.0	63.4

Table 9.2

Centres in Rajasthan

Name of Centre	Frequency	Share in the State (%)	Share in Total Sample (%)
Udaipur	328	15.0	5.5
Bajajnagar, Jaipur	218	9.9	3.6
Shastrinagar, Jaipur	52	2.4	0.9
Murlipura, Jaipur	81	3.7	1.4
Chomu	50	2.3	0.8
Reengus	69	3.1	1.2
Kishangarh	316	14.4	5.3
Beawar	11	0.5	0.2
Bharatpur, Kotwali	47	2.1	0.8
Bharatpur, Mandi	86	3.9	1.4
Alwar	180	8.2	3.0
Jhunjhunu	71	3.2	1.2
Chirawa	7	0.3	0.1
Mukundgarh	31	1.4	0.5
Sri Ganganagar	111	5.1	1.9
Bikaner	387	17.7	6.5
Jodhpur	146	6.7	2.4
Total	2191	100.0	36.6

In section 4.1 we discuss the gender distribution of the whole sample, sections 4.3, 5.4, 5.5 and 5.6 respectively discusses the age structure, educational level, income distribution, occupational status and the gender distribution of each of these components.

4.1 Gender Distribution:

The share of females was found to be 30% for the whole sample (Figure 4.1.1) , 34% within Maharastra (Figure 4.1.2) and 24% within Rajasthan (Figure 4.1.3) .

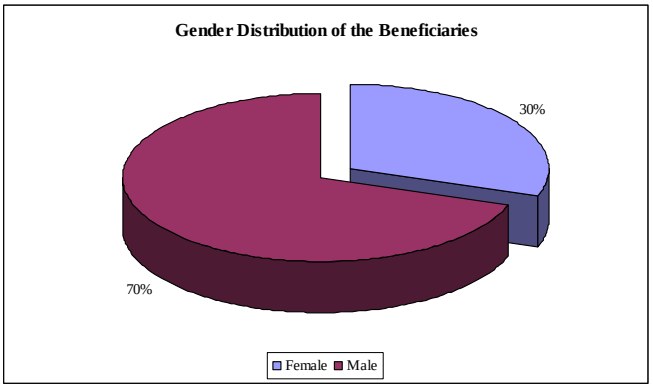

Figure 4.1.1

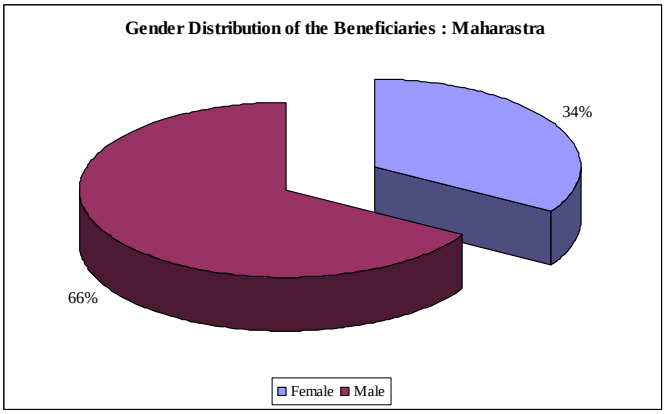

Figure 4.1.2

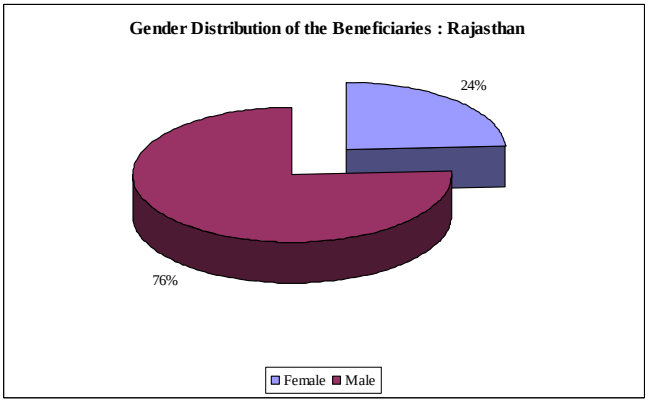

Figure 4.1.3

4.2 Age Structure:

The age structure of the beneficiaries of the DCA programme gives us an idea of the distribution of the beneficiaries according to their ages. Figures 4.2.1 to 4.2.3 illustrates the age structure for all the beneficiaries taken together and its intra and inter regional break-up.

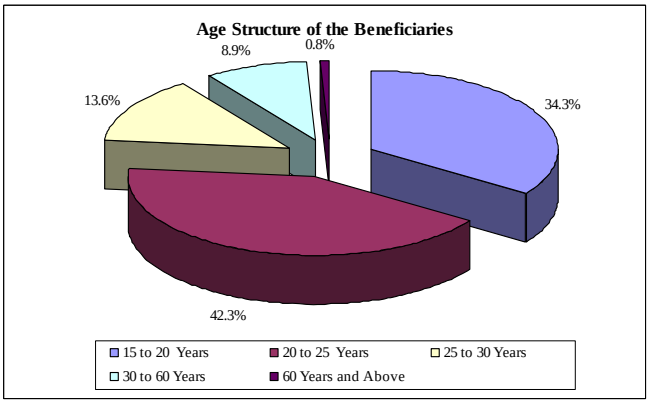

Figure 4.2.1

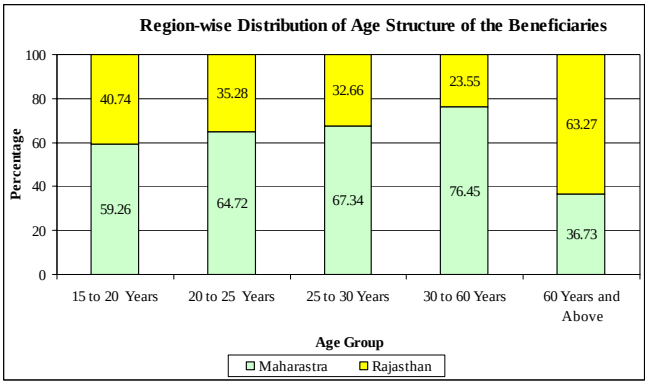

Figure 4.2.2

It can be observed from the figure 4.2.2 that Maharastra performs better than Rajasthan in catering to the more productive age group. However Maharastra has the largest share in 30 to 60 years age group.

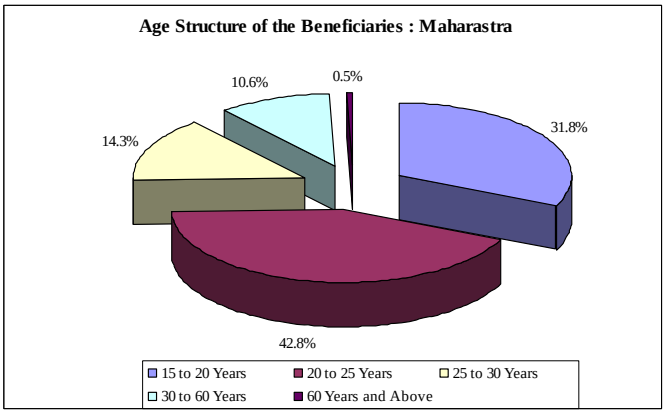

Figure 4.2.3

From figures 4.2.3 and 4.2.4 we find that nearly 75% of the beneficiaries of the training programme in Maharastra are in the age group of 15 to 25 years as against nearly 80% of the beneficiaries in Rajasthan. The centre-wise distribution of age structure and its gender distribution have been presented in table 4.2.1 and 4.2.2

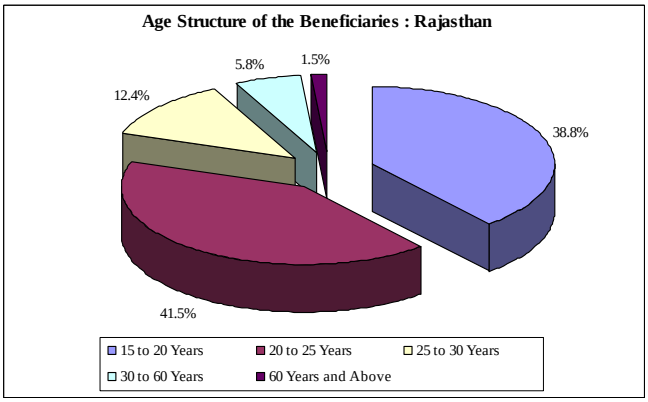

Figure 4.2.4

Table 10: Age Structure: Maharastra (All Figures are in Percentages)

Centre	Age Groups (In Years)				
	15 to 20	20 to 25	25 to 30	30 to 60	60 and Above
Akola	38.64	38.64	15.15	7.58	0.00
Alibag	25.31	16.60	8.71	48.96	0.41
Amravati, Gadge Nagar.	29.91	48.72	14.53	6.84	0.00
Amravati, Rukmini Nagar	35.80	40.47	15.95	7.78	0.00
Aurangabad	18.02	44.19	21.51	16.28	0.00
Dhule	52.00	40.00	8.00		0.00
Gargoti	27.21	63.95	3.40	4.08	1.36
Kolhapur	59.77	21.84	9.20	6.90	2.30
Latur	49.44	37.08	8.99	4.49	0.00
Nagpur	18.31	50.70	15.49	15.49	0.00
Pune	21.14	46.86	24.00	7.43	0.57
Ratnagiri, (Hostel)	24.00	50.67	13.33	11.33	0.67
Ratnagiri, Tambat Ari	25.31	49.00	15.84	8.98	0.87
Sangli	27.06	54.79	11.22	6.93	0.00
Satara	48.06	36.43	10.85	4.65	0.00
Solapur	34.64	42.03	16.40	6.93	0.00
Yavatmal	41.56	35.94	15.63	6.25	0.63

From Table 10 we notice that except for Dhule, Kolhapur, Latur, Satara and Yavatmal where more than 40% of the beneficiaries are in the age group of 15 to 20 years, in the other centres the maximum beneficiaries are in the age group of 20 to 25 years. The Alibag centre where almost 49% of the beneficiaries are in the age group of 30 to 60 years clearly stands out as an exception. This may partly be explained by the fact that in Alibag, the DCA course has been very popular among working persons especially those employed in the fertiliser industry nearby. For the age group of 60 years and above Kolhapur centre accounts for the highest number of beneficiaries within Maharastra.

As regards the gender distribution of age structure, it is seen that except for the Yavatmal and Satara centres, in the other centres across all the age groups the share of males is higher than that of females. In the Yavatmal centre, in the Age group of 15 to 20 years, the share of females is 57.14%, and in the 20 to 25 years' age group, the share of females is 50.43%. In the Satara centre, 50% of the beneficiaries are females in the age group of 25 to 30 years and its share rises to a phenomenal 83% in the age group of 30 to 60 years.

Although there are exceptions, in Rajasthan (Table 11), most of the beneficiaries are in the age group of 15 to 20 and 20 to 25 years. In Bharatpur, Mandi, and the Chirawa centres, the share of beneficiaries in the age group of 15 to 20 years is as high as 67% and 71% respectively. In Chirawa this may be due to the fact that the centre is only a couple of months old and hence it is presently

popular among the students who have just completed their SSC or HSC. In the Alwar centre, 30% of the beneficiaries are from the age group of 25 to 30 years. In none of the other centres is the share of beneficiaries in this group greater than 16%. In the age group of 60 years and above, Jaipur, Bajajnagar accounts for the highest share of 7.44%. Thus, as in Maharastra, the post retirement group are found to be unenthusiastic when it comes to learning computers.

Table 11: Age Structure: Rajasthan (All Figures are in Percentages)

Centre	Age Groups (In Years)				
	15 to 20	20 to 25	25 to 30	30 to 60	60 and Above
Alwar	6.67	57.78	30.00	5.56	0.00
Beawar	42.86	57.14	0.00	0.00	0.00
Bharatpur, Kotwali	58.54	36.59	0.00	4.88	0.00
Bharatpur, Mandi	67.14	30.00	1.43	1.43	0.00
Bikaner	53.17	30.03	9.92	5.79	1.10
Chirawa	71.43	28.57	0.00	0.00	0.00
Chomu	32.00	52.00	12.00	4.00	0.00
Jaipur, Bajajnagar	23.26	48.84	13.02	7.44	7.44
Jaipur, Murlipura	51.32	43.42	5.26	0.00	0.00
Jaipur, Shastrinagar	30.77	46.15	15.38	7.69	0.00
Jhunjhunu	55.71	32.86	5.71	5.71	0.00
Jodhpur	29.86	45.83	15.28	7.64	1.39
Kishangarh	38.31	38.96	13.31	7.14	2.27
Mukundgarh	62.07	34.48	3.45	0.00	0.00
Reengus	79.31	15.52	1.72	1.72	1.72
Sri Ganganagar	46.73	37.38	10.28	4.67	0.93
Udaipur	29.94	49.69	13.27	7.10	0.00

When we look at the gender distribution of the age structure in Rajasthan, we find that in Chirawa and Chomu, none of the beneficiaries are females. In the age group of 15 to 20 years the share of males is higher than that of females for all the centres. In the age group of 20 to 25 years, the share of females exceeds that of males in Beawar, Bharatpur, Kotwali and Mukundgarh. However considering the fact that the centre is only a couple of months old and has a total strength of only 11 students nothing much can be read from the figures in Beawar. In the age group of 25 to 30 years the share of females exceeds that of males in Reengus, while in the age group of 60 years and above the share of females exceeds that of males in Kishangarh. For the age group of 30 to 60 years, though the share of females does not exceed that of males in any of the centres it is equally distributed amongst males and females in Jaipur, Shastrinagar and Jhunjhunu.

The share of male is seen to be very high for most of the centres in Rajasthan as against Maharastra where there is a relatively more equal distribution. This could be due to the absence of

female instructors in most of the centres of Rajasthan, a point which we mentioned in the previous section.

4.3 Educational Level:

The minimum eligibility criterion for the DCA course is 10th appearing. In the following account we assess the break-up of the beneficiaries according to their educational level. Figures 4.3.1 to 4.3.4 give an idea of the educational level for all the beneficiaries taken together and its intra and inter regional break-up.

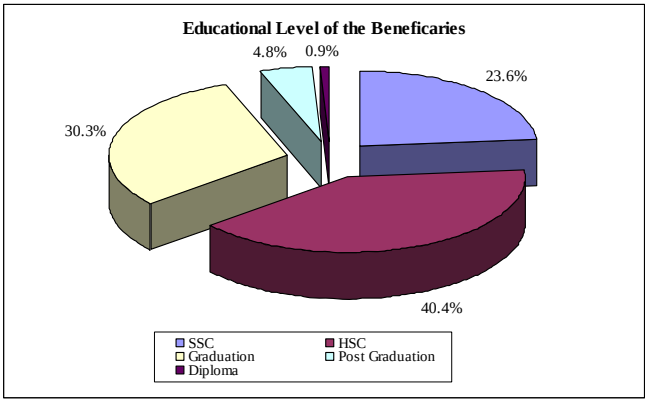

Figure 4.3.1

It is evident from figure 4.3.1 that 64% of the beneficiaries are those who have just completed school education. 30% are graduates who have greater potential to get a job.

Figure 4.3.2 shows that while Maharastra dominates in diploma, HSC and graduation categories, Rajasthan has a higher share among the post graduates.

Comparing figures 4.3.3 and 4.3.4 we can observe that HSC and graduates have a higher share of the beneficiaries in Maharastra when compared with Rajasthan where SSCs have as much share as the graduates. HSC tops the list in both the regions.

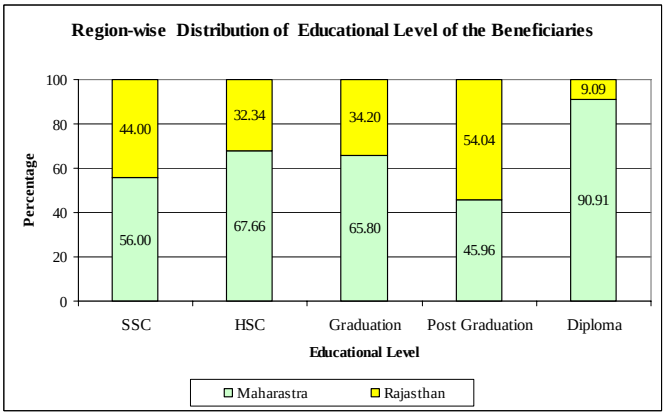

Figure 4.3.2

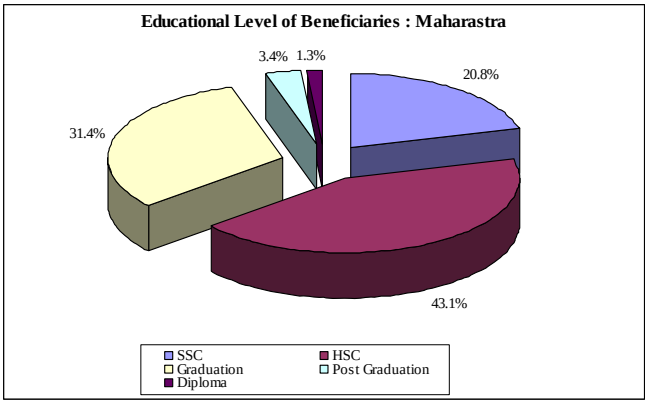

Figure 4.3.3

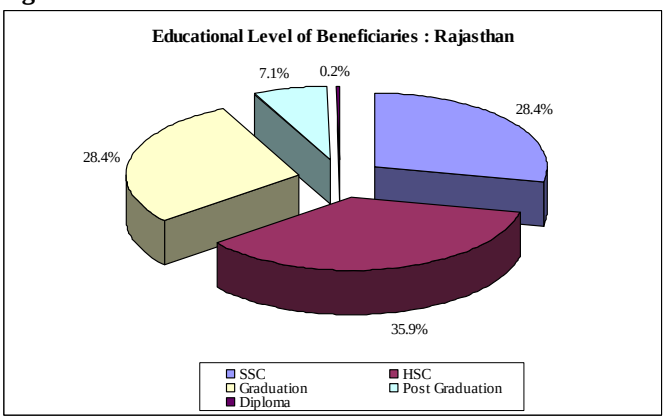

Figure 4.3.4

Now we look at the centre-wise distribution of educational level and its gender distribution. In Maharastra (Table 12) we find that except for Dhule, Kolhapur and Latur, the share of beneficiaries from the HSC group is greater than that of the SSC group. Excluding the Sangli and the Alibag centres, in none of the other centres is the percentage graduate beneficiaries more than 40%. The high percentage of students in the SSC and HSC groups indicate that the course is mainly popular amongst those who want to enhance their skills in job market after completion of the school education and before they actually join a graduate level course.

An analysis of the gender distribution of the educational level in Maharastra, indicate that for most of the centres, across all levels of educational qualification, the share of males is higher than that of females. Notable exceptions are the Ratnagiri (Hostel), Ratnagiri Tambat Ari, Satara and Yavatmal centres. In the Ratnagiri (Hostel) centre the share of males and females are equally distributed for the SSC group. While in Ratnagiri, Tambat Ari and Satara the share of females exceeds that of males for the graduates and the post graduates, in the Yavatmal centre the share of females is greater than that of males for the SSC, graduate and post graduate groups.

Table 12: Educational Level: Maharastra (All Figures are in Percentages)

Centre	Educational Level				
	SSC	HSC	Graduation	Post Graduation	Diploma
Akola	34.78	42.75	15.22	4.35	2.90
Alibag	12.69	39.62	44.23	3.46	0.00
Amravati, Gadge Nagar.	25.83	48.33	17.50	4.17	4.17
Amravati, Rukmini Nagar	19.77	37.98	29.07	11.24	1.94
Aurangabad	36.05	37.79	20.35	5.81	0.00
Dhule	52.00	28.00	16.00	4.00	0.00
Gargoti	16.22	62.16	20.27	0.00	1.35
Kolhapur	39.66	39.11	17.88	3.35	0.00
Latur	36.56	35.48	25.81	2.15	0.00
Nagpur	19.72	46.48	21.13	12.68	0.00
Pune	21.02	52.27	25.00	0.00	1.70
Ratnagiri, (Hostel)	17.22	57.62	21.19	3.31	0.66
Ratnagiri, Tambat Ari	14.50	40.52	39.28	2.73	2.97
Sangli	13.20	40.59	42.57	3.63	0.00
Satara	24.09	54.01	18.25	3.65	0.00
Solapur	17.66	47.25	35.09	0.00	0.00
Yavatmal	24.00	33.54	37.23	3.38	1.85

Table 13: Educational Level: Rajasthan (All Figures are in Percentages)

Centre	Educational Level				
	SSC	HSC	Graduation	Post Graduation	Diploma
Alwar	0.00	16.67	56.67	26.67	0.00
Beawar	81.82	9.09	0.00	9.09	0.00
Bharatpur, Kotwali	23.40	36.17	31.91	8.51	0.00
Bharatpur, Mandi	48.84	38.37	11.63	1.16	0.00
Bikaner	46.25	36.69	10.08	6.98	0.00
Chirawa	14.29	71.43	0.00	14.29	0.00
Chomu	6.12	53.06	38.78	2.04	0.00
Jaipur, Bajajnagar	19.35	36.87	43.32	0.46	0.00
Jaipur, Murlipura	32.10	34.57	30.86	2.47	0.00
Jaipur, Shastrinagar	28.85	19.23	46.15	3.85	1.92
Jhunjhunu	0.00	52.11	32.39	15.49	0.00
Jodhpur	23.29	41.78	27.40	6.16	1.37
Kishangarh	17.21	35.06	44.48	2.60	0.65
Mukundgarh	22.58	25.81	32.26	19.35	0.00
Reengus	47.83	39.13	11.59	1.45	0.00
Sri Ganganagar	9.01	58.56	23.42	9.01	0.00
Udaipur	47.26	31.71	14.63	6.40	0.00

In Rajasthan, except for Beawar, Bharatpur, Mandi, Bikaner, Reengus and Udaipur in other centres the share of beneficiaries in the HSC group is greater than the SSC group. In Chirawa, Chomu, Jhunjhunu and Sri Ganganagar, more than 50% of the beneficiaries are in the HSC group. A notable feature of the Jhunjhunu and Alwar centres is that percentage of beneficiaries in the SSC group is zero in these two centres. The share of graduates is highest in Alwar (56.67%) followed by Jaipur, Shastrinagar and Kishangarh. Chirawa and Beawar with total beneficiaries of 11 and 7 respectively are notable outliers in the sample. The percentage of beneficiaries in SSC group in Beawar is 81.82% while in Chirawa, the percentage of beneficiaries in HSC group is 71.43%. Since these two centres were set up only a few months ago and have very low total intake, nothing much can be interpreted from these figures. The share of post graduates too is highest in Alwar (26.67%) followed by Mukundgarh and Jhunjhunu.

A look at the gender distribution of educational level in Rajasthan reveals that excluding the Beawar, Bharatpur, Kotwali, Jaipur, Bajajnagar and Mukundgarh centres, in the other centres, the share of males is greater than that of females. In Beawar cent percent of the beneficiaries in the HSC and Post Graduates, group are females. But considering the exceptionally small size of the sample in Beawar, nothing much can be construed from this figure. In Bharatpur, Kotwali, the share of females exceeds that of males for the graduates, while in Mukundgarh the share of females is greater than that of males for the graduates as well as the post graduates. For the post graduates, the share of males and females are equal in Bharatpur, Kotwali, Kishangarh and Sri Ganganagar centres.

4.4 Income Distribution:

This section dwells on the income distribution of beneficiaries of the training programme. An idea of the income distribution of the whole sample taken together and its intra and inter regional break-up can be obtained from figures 4.4.1 to 4.4.4.

Figure 4.4.1 shows that 40% of the total sampled beneficiaries come from families whose annual income is less than Rs.30,000 (poor). Lower middle income group in the range of Rs.30,000 to Rs.60,000 represent 34% of the beneficiaries. Together therefore, 74% of the people benefiting from the subsidized computer education training facility are from the low income group which do not pay any income tax. This indicates that by and large the objective of the foundation to cater to the requirements of the economically under privileged is fulfilled. About 21% are from middle-income group, in the range of Rs.30,000 to Rs.60,000. In the light of this it could be mentioned that even if we do not restrict the admission on the basis of income criterion, (which is too far difficult to

administer and implement), majority of the beneficiary would be from middle and lower income group.

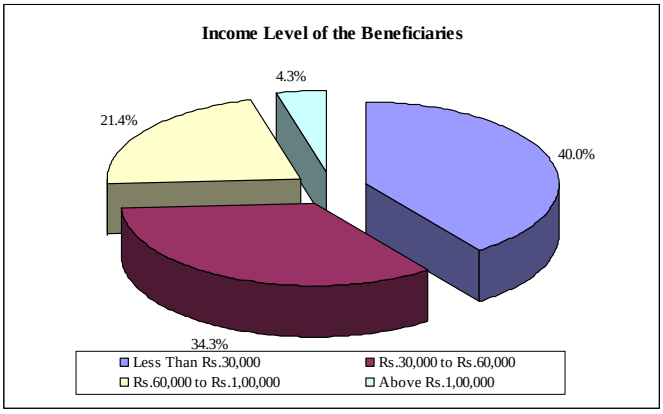

Figure 4.4.1

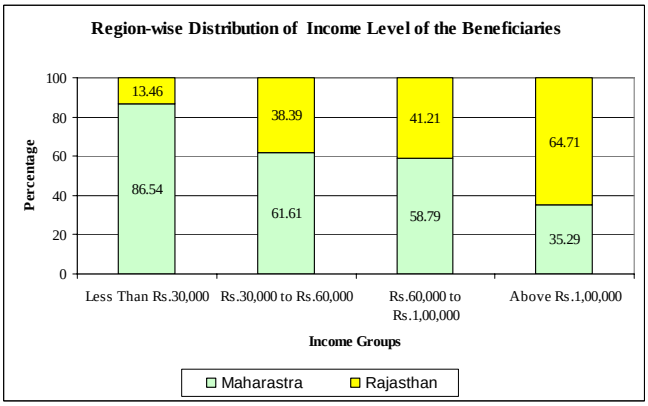

Figure 4.4.3

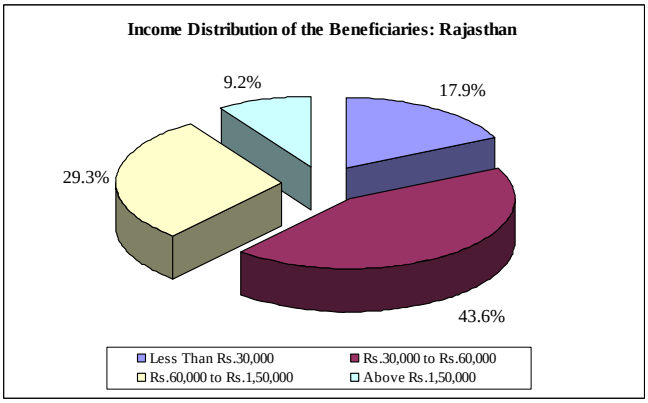

Figure 4.4.4

From figures 4.4.3 and 4.4.4 it is evident, that Maharashtra has the largest share of beneficiaries from the poor income group (59.6%) and from lower middle income group (30.2%). Rajasthan also has a large share (43.6%) in lower middle income group, but relatively low share (17.9%) for poor income group. To discuss the centre-wise distribution of income level and its gender distribution, we make use of tables 14 to 16.

Table 14: Income Groups: Maharashtra (All Figures are in Percentages)

Centre	Income Groups			
	Less Than Rs.30,000	Rs.30,000 to Rs.60,000	Rs.60,000 to Rs.1,50,000	Above Rs.1,50,000
Akola	19.57	65.94	14.49	0.00
Alibag	13.75	23.33	47.50	15.42
Amravati, Gadge Nagar.	67.50	30.00	2.50	0.00
Amravati, Rukmini Nagar	33.12	29.87	30.52	6.49
Aurangabad	57.56	38.95	3.49	0.00
Dhule	94.44	5.56	0.00	0.00
Gargoti	79.03	16.13	4.03	0.81
Kolhapur	46.54	35.22	17.61	0.63
Latur	48.91	45.65	4.35	1.09
Nagpur	60.98	14.63	21.95	2.44
Pune	68.71	25.17	5.44	0.68
Ratnagiri, (Hostel)	49.60	24.80	24.80	0.80
Ratnagiri, Tambat Ari	44.63	32.99	21.34	1.04
Sangli	56.95	25.17	17.55	0.33
Satara	54.46	28.57	16.07	0.89
Solapur	82.11	13.30	4.13	0.46
Yavatmal	23.69	44.31	29.54	2.46

In Maharashtra (Table 14), most of the beneficiaries are in the poor income group of less than Rs.30,000. In this income group, Dhule has the maximum share of 94.4%, followed by Solapur (82%) and Gargoti (79%). A notable exception is Alibag where the percentage share of poor beneficiaries is 13.75%. In the lower middle income group Akola has the highest share of 65.9% followed by Latur (45.7%) and Yavatmal (44.3%). For most of the other centres 20% to 40% of the students are in the lower middle income group. Percentage share of students in the middle income group is highest in Alibag (47.5%) followed by Amravati, Rukmini Nagar (30.5%) and Yavatmal (29.5%).

The gender distribution of income groups of the beneficiaries in Maharastra illustrates that for all except the rich income group, the share of female beneficiaries is lower than that of males. Notable exceptions are Yavatmal and Ratnagiri, Tambat Ari, where share of females is greater than that of males in the poor income group. For three centres Nagpur, Kolhapur and Sangli the share of females is cent percent in the rich income group. It maybe noted that in Yavatmal the share of females in the lower middle income group is marginally higher than that of females.

In Rajasthan (Table 15) the income data are not available for the centre in Bikaner. The share of beneficiaries in the poor income group of below Rs.30,000 is highest in Reengus (72%), followed by Chirawa (42.86%) and Chomu (40%). Of these three, the centres in Reengus and Chomu are

located in rural areas. From the table it is clear that in Rajasthan, the bulk of the beneficiaries are in the lower middle income group of Rs.30,000 to Rs.60,000 with the percentage share of beneficiaries being as high as 90.9% in Beawar (which as we noted earlier is in any case an outlier) followed by 87% in Mukundgarh and 64% the Murlipura and Shastrinagar centres of Jaipur.

Table 15: Income Groups: Rajasthan (All Figures are in Percentages)

Centre	Income Groups			
	Less Than Rs.30,000	Rs.30,000 to Rs.60,000	Rs.60,000 to Rs.1,50,000	Above Rs.1,50,000
Alwar	0.56	5.56	37.22	56.67
Beawar	9.09	90.91	0.00	0.00
Bharatpur, Kotwali	19.15	23.40	55.32	2.13
Bharatpur, Mandi	20.24	44.05	33.33	2.38
Bikaner	N.A	N.A	N.A	N.A
Chirawa	42.86	57.14	0.00	0.00
Chomu	40.00	44.44	13.33	2.22
Jaipur, Bajajnagar	18.38	39.46	37.84	4.32
Jaipur, Murlipura	8.64	64.20	25.93	1.23
Jaipur, Shastrinagar	17.65	64.71	17.65	0.00
Jhunjhunu	39.44	59.15	1.41	0.00
Jodhpur	10.32	60.32	28.57	0.79
Kishangarh	11.65	52.63	30.83	4.89
Mukundgarh	12.90	87.10	0.00	0.00
Reengus	72.31	23.08	4.62	0.00
Sri Ganganagar	11.21	45.79	40.19	2.80
Udaipur	26.26	40.40	33.33	0.00

Note: "N.A." indicates non availability of data.

The share of males is higher than that of females in all the centres for the poor income group. In the lower middle income group the share of females is greater than that of males for the exceptional case of Beawar. In the middle income group the share of females is greater than that of males in Jaipur, Shastrinagar and Jhunjhunu. For the rich income group, the share of females is high in Bharatpur, Mandi, Jaipur, Murlipura, and Sri Ganganagar. In the Jaipur, Bajajnagar centre, males and females are equally distributed in this income group.

4.5 Occupational Structure:

To analyse the occupational structure we have classified the beneficiaries into four categories, 'Employed', 'Unemployed' 'Student' and 'Student and Employed'. The occupational structure of all the beneficiaries taken together and its intra and inter regional break-up is illustrated in figures 4.5.1 to 4.5.4. Figure 4.5.1 shows that nearly two thirds of the beneficiaries are students pursuing various

courses, 18% are unemployed and 15% have actually joined the course while being employed in some organisation, be it private or government.

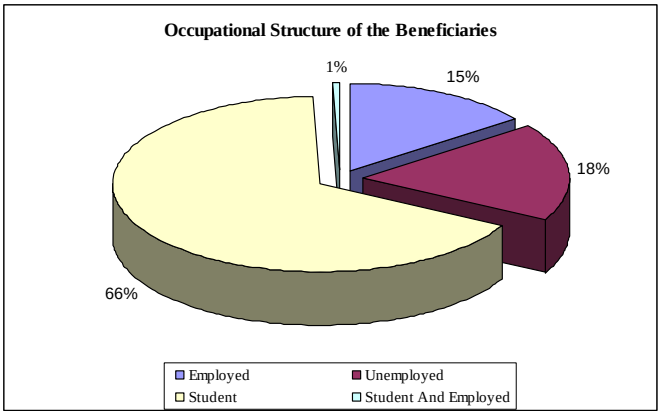

Figure 4.5.1

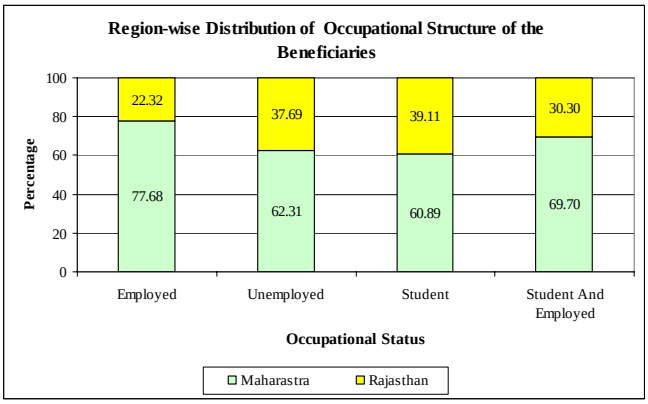

Figure 4.5.2

Region-wise distribution of occupational structure reveals that the share of Maharastra is greater than that of Rajasthan in all the categories (Figure 4.5.2). Within the states, the share of students is the largest in both Maharastra and Rajasthan (Figures 4.5.3 and 4.5.4.). Whereas in Maharastra the shares of employed and unemployed are equal at 17.8% (Figure 4.5.3) in Rajasthan the figures are 9% and 18.8% respectively (Figure 4.5.4).

In Maharastra (Table 16) the share of employed beneficiaries is highest in Alibag (39.62%) followed by Aurangabad (25.58%) and Ratnagiri (Hostel) (21.85%). In most of the other centres the share of employed is between 10% and 21%. For most of the centres the percentage share of unemployed varies between 10% and 20%. Notable exceptions are Sangli (35.6%), Ratnagiri, Tambat Ari (29.57%), Latur (5.38%), Dhule (4%), Solapur (3.44%), and Gargoti (1.35%). The percentage share of student beneficiaries of the course is quite high across all centres. The share of students is highest in Gargoti (93.92%), followed by Latur (88.17%), Satara (83%) and Amravati (83%). It is to be noted that in many of the centres like Alibag, Pune, Ratnagiri, Amravati (Gadge

Nagar), Kolhapur, Satara and Sangli a very small percentage of the beneficiaries are actually pursuing their studies while being employed in some organisation either private or government.

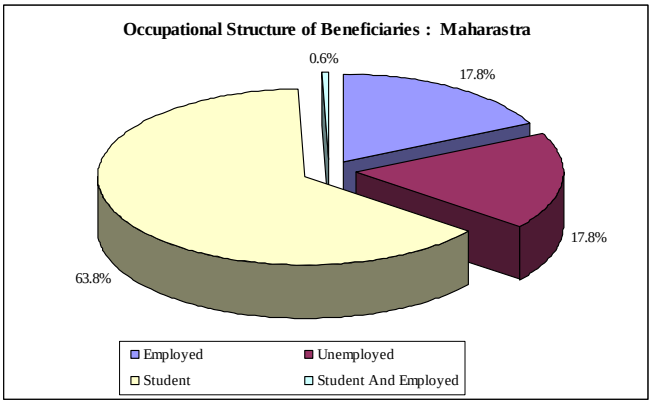

Figure 4.5.3

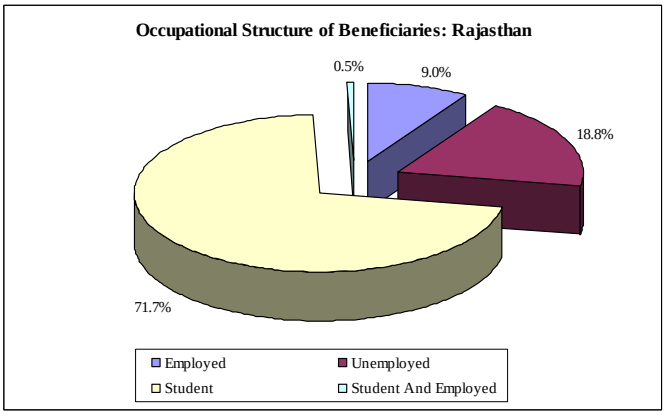

Figure 4.5.4

The gender distribution of the occupational structure for centres in Maharastra shows that except for Latur the percentage share of female employed beneficiaries is low in all the centres and varies in the range of 10% to 25%. Among the unemployed beneficiaries while males and females are equally distributed in Gargoti, the share of females is higher than that of males Alibag, Dhule, Latur, Nagpur, Pune and Ratnagiri, Tambat Ari. The share of male student beneficiaries is higher in all centres except Yavatmal, where the share of female student beneficiaries is 56.54%. In the 'Student and Employed' while males and females are equally distributed in Alibag, the share of males exceeds that of females in Amravati, Gadge Nagar, Kolhapur, Latur, Pune and Satara that of females exceeds in Ratnagri, Tambat Ari.

Table 16: Occupational Structure: Maharashtra

Centre	Occupational Structure			
	Employed	Unemployed	Student	Student And Employed
Akola	12.50	9.56	77.94	0.00
Alibag	39.62	17.31	42.31	0.77
Amravati, Gadge Nagar.	3.33	13.33	82.50	0.83
Amravati, Rukmini Nagar	14.79	9.73	75.49	0.00
Aurangabad	25.58	16.86	57.56	0.00
Dhule	20.00	4.00	76.00	0.00
Gargoti	4.73	1.35	93.92	0.00
Kolhapur	13.41	10.06	74.30	2.23
Latur	5.38	5.38	88.17	1.08
Nagpur	15.49	9.86	74.65	0.00
Pune	10.80	17.05	71.59	0.57
Ratnagiri (Hostel)	21.85	20.53	57.62	0.00
Ratnagiri, Tambat Ari	21.30	29.57	47.49	1.63
Sangli	20.46	35.64	43.89	0.00
Satara	6.62	9.56	83.09	0.74
Solapur	21.10	3.44	75.46	0.00
Yavatmal	9.85	24.31	65.85	0.00

Table 17: Occupational Structure: Rajasthan (All Figures are in Percentages)

Centre	Occupational Structure			
	Employed	Unemployed	Student	Student And Employed
Alwar	18.89	13.44	67.67	0.00
Beawar	0.00	0.00	100.00	0.00
Bharatpur, Kotwali	21.28	0.00	78.72	0.00
Bharatpur, Mandi	2.33	2.33	95.35	0.00
Bikaner	2.07	2.58	95.35	0.00
Chirawa	14.29	0.00	85.71	0.00
Chomu	14.29	10.20	73.47	2.04
Jaipur, Bajajnagar	9.05	18.57	72.38	0.00
Jaipur, Murlipura	18.52	1.23	80.25	0.00
Jaipur, Shastrinagar	7.69	13.46	76.92	1.92
Jhunjhunu	1.41	0.00	98.59	0.00
Jodhpur	13.01	9.59	75.34	2.05
Kishangarh	5.54	17.92	75.90	0.65
Mukundgarh	6.45	9.68	83.87	0.00
Reengus	7.25	4.35	88.41	0.00
Sri Ganganagar	6.31	20.72	72.97	0.00
Udaipur	13.56	31.55	53.94	0.95

In Rajasthan (Table 17) the percentage of employed beneficiaries is low across all the centres, with the share not exceeding 21% in any of the centres. In 4 centres less than 5% of the beneficiaries are employed and in 6 centres the percentage share of employed beneficiaries ranges between 5% and 10%. The share of beneficiaries in the unemployed category is below 20% in all the centres except Udaipur (31.5%) and Sri Ganganagar (20.72%). The percentage of students is greater than 70% for all the centres except Udaipur (53.94%) and Alwar (67.67%). A small percentage of beneficiaries fall in the category of 'Student and Employed' in Chomu, Jaipur, Shastrinagar, Jodhpur, Kishangarh and Udaipur.

Gender distribution of the occupational structure in Rajasthan, reveals that except for the Bharatpur, Kotwali, Jaipur, Shastrinagar and Mukundgarh and where the share of employed beneficiaries are equally distributed between males and females, in all the other centres, the share of male is higher. Notable exception is Bharatpur, Mandi, where cent percent of the employed beneficiaries are females. In the 'Unemployed' category too the percentage share of males is greater than that of females for all the centres, except the centres in Bharatpur, Mandi, Jaipur, Shastrinagar, Mukundgarh and Reengus. The percentage share of females in 'Student' category is lower than that of males in all the centres except for Beawar. Except for the Udaipur centre, in the other centres, namely, Jaipur, Shastrinagar, Chomu, Kishangarh and Jodhpur in the 'Student and Employed 'category, the percentage share of female beneficiary is zero.

Section 5: Summary and Conclusions:

This study has attempted to carry out a socio economic impact assessment of the subsidized computer education provided by a non-governmental charitable organization. The study largely focused on the computer training facilities available in two states, namely Maharashtra [excluding Mumbai and Thane] and Rajasthan. These two represent an economically strong and weak [respectively] province in India. Data for the analysis is largely drawn from the information available with the computer training centres in these two states and a sample study of the beneficiaries [both past and present].

The results of the analysis broadly point out that:

- The highest number of enrolments is from the income group whose yearly income is below Rs.30,000 and those between Rs.30,000 – Rs.60,000.

- Most of the students pursuing a short-term course are students enrolled in Higher Secondary or a graduation course. They believe that completion of it would definitely give them an edge when they apply for a job.
- Some of the beneficiaries [educated unemployed] have started their own computer centres where they impart training in hardware and software courses. Others have opted to open centres which specializes in DTP work for offices, students etc.
- About 25% to 30% of the students who have finished their advanced course are currently employed as computer operators and data entry personnel in firms specializing in back-office jobs. About 5% of the girls who have completed the course have got jobs as receptionists in hotels and firms.
- The course has been helpful to students deficient in English, to overcome their hesitations in public interaction and has had a positive effect in improving their communication skills.
- Many housewives are actually learning computers not only to enhance their career opportunities, but also to help their children who have to learn computer application in schools. In the process they have come to know of the Internet and are now able to use the e-mail and search the net.
- There is awareness, even among the illiterates, that this is an age of computers. So if given a chance they would like to send their children to learn the computers.
- It is seen that parents of children in lower income group, who are aware of the importance of IT, are also eager to provide their children with the best possible books and the best possible tutors for their college and school education. This is being done with the hope that their children will have a better chance to compete. Under these circumstances, they may not be in a position to afford computer training available in the market and therefore, it is essential that computer education be imparted at a low cost.

On the whole computer education appears to have tremendous scope to enhance poor people's opportunities by improving their access to markets. Access to markets can make a small beginning and be a part of the development initiatives in a world of information revolution and participatory economic development.

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