CHAPTER – VII

RAMAKRISHNA MISSION IN THE FIELD OF TECHNICAL AND VOCATIONAL EDUCATION

"We must have life-building, man-making, character-making assimilation of ideas."-Swami Vivekananda

INTRODUCTION

Technical and vocational education and training (TVET) issues have received much attention this past decade and TVET topics have been the focus at global forums organized by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the Organisation for Economic and Cultural Development (OECD), and the International Labour Organization (ILO). Major world reports related to TVET have been released to document these discussions on the future direction of the vocational education sector. While TVET discussions in OECD countries have covered various topics ranging from shortages of skilled workers (Australia, Portugal, Spain), retention and completion rates at the secondary level (U.S., England, Denmark), to regional imbalances in development (Germany and Korea) (Grubb, 2006), in emerging and less developed countries TVET discussions have focused on improving economic growth and competitiveness, and addressing issues around social exclusion and equity (Psacharopoulos, 1997). In developing countries specifically, the recent rounds of debate around TVET are driven by concerns around the supply and demand of labour (World Bank, 2013). The imbalance in the supply and demand of labour has been attributed to massive demographic shifts ("youth bulges") (World Bank, 2013), the changing nature of work and technological innovations (Grubb, 2006), low secondary education outcomes, especially among females (World Bank, 2012), poor flow of information between employers and job seekers, and a mismatch between skills, aspirations and labour market needs (Aggarwal et al., 2011; World Bank, 2012). While reforms in the TVET sector are not the only identified solutions to correct labour market imbalances, they have been in the spotlight in several developing countries (World Bank, 2012; 2013) and guide the focus of this dissertation. India currently faces several of the education and labour challenges described above. Nearly 50 percent of fifth graders in India are unable to read second grade material, and the dropout rate at the secondary school level is nearly 30 percent (Kingdon, 2007). Further, only a small proportion of labour force entrants (14 percent) are likely to have a college degree or some vocational training (Confederation of Indian Industries, 2009). In response, policymakers have focused on expanding skills training opportunities at the secondary and postsecondary level. Even though TVET at the secondary school level has not been popular in India (Tilak, 2002), one of the aims of a recent secondary school-level reform, the Rashtriya Madhyamik Shiksha Abhiyan (Government of India, 2009a; RMSA), is to attract and retain students in secondary school by introducing vocational content at the secondary level. Similarly, the recent National Skill Development Policy (Government of India, 2009b), targets expanding TVET opportunities through public-private partnerships and aims to train 500 million people over the next 10 years.

There has been relatively little academic debate and research on TVET policy and practice in developing countries. The bulk of available research pertains to OECD countries. The research from developing countries is scant and what is available tends to be narrowly focused on employability of TVET graduates. Moreover, existing studies do not articulate an explicit theory of action that explains how a vocational program should work and the impact it should have (Grubb, 2006). In developed and developing countries alike, the research has tended to ignore issues of who is served by TVET programs and whether reforms reach the target groups that they purport to serve. In light of the current expansions envisioned for TVET in India, some critical questions must be raised. What factors motivate participation in TVET? What are the economic returns to TVET for the individual and the household? Does participation in TVET in secondary school improve future educational and labour market outcomes? There has been no published research from India that has adequately addressed these questions. Further, the evidence from other developing countries has been largely missing in the case of determinants of participation or ambiguous in the case of TVET returns and impact of secondary TVET. There are several reasons to advance our understanding of how individuals make decisions regarding participation in vocational programs, including the types of programs they chose and the returns they expect from participating in these programs. First, a recurring topic in policy discussions concerns the types of education and training opportunities that must be provided to best meet the needs of society and individuals. Individuals make decisions regarding accessing education and training programs from the secondary stage and beyond. Understanding this decision-making process around human capital investments, and the kinds of information and resources that are used in order to make these decisions is valuable for effective policy and program formulation. Second, it would also be useful to gain an understanding of the factors that mediate or moderate the human capital investment decision-making process of individuals and families. This would be especially helpful in identifying circumstances that lead to inequitable access or differentially affect certain groups. Third, most discussions around vocational education are focused on whether the sector is responsive to the needs of stakeholders. The issues extend beyond those related to manpower forecasting, institutional policies and supply-side activities to how vocational education is perceived and used by the population (Psacharopoulos, 1988). Fourth, the TVET sector in India is a complex system offering a wide array of educational and training options for individuals at different levels of educational attainment. There is significant variation not only in the types of programs offered (broadly, TVET programs can be classified as “formal” or “informal”), but also in the proportion of participants and profiles of participants across types of TVET programs. While “formal” TVET programs in India have received some research attention, little is known about “informal” TVET and the participants who access these programs.

TECHNICAL AND VOCATIONAL EDUCATION IN INDIA: WHAT STUDIES SAY?

Vocational education and training goes by various names, such as career and technical education, technical education, vocational education/training, skill development, and technical and vocational education and training. Across advanced and developing economies, vocational education and/or training programs are offered at various types of institutions, including schools, colleges, public and private vocational institutions, on the job, and at informal settings like the home or community (Grubb & Sweet, 2004; Karmel, 2011; Chappell 2003). Moreover, they are offered at various levels within the education system. The United Nations Institute of Statistics ([UN-UIS]; 2006) has identified students at four different levels of the International Standard Classification of Education – from level 2, which corresponds to lower secondary education, up to level 5, which corresponds to the first cycle of higher education. In its 'Revised Recommendations for Technical and Vocational Education and Training', UNESCO (2001) provides a definition for vocational education and training that reflects the shifts over time in thinking about what constitutes vocational activities. The shift has been from a view of vocational education quite narrowly in terms of preparing individuals for a particular job or occupation to a vision of it as a strategy for addressing various educational, economic, and social objectives. 'Technical and Vocational Education and Training' (TVET)10 is defined as "a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life" (UNESCO, 2001). As such, TVET includes all activities undertaken at various stages, from secondary to postsecondary and on-the-job training. This dissertation focuses on TVET activities at the secondary and postsecondary level, regardless of the type of institution providing the training. That students who tend enroll in TVET are lower achieving, on average, has popular consensus and has been used to describe TVET participants in developing and developed countries (Agodini et al., 2004; Agrawal, 2012; Rothman, 2008). This is a logical inference given the relatively low eligibility requirements and status accorded to TVET options. However, there is limited empirical evidence showing that academic achievement or ability influences TVET participation. Findings from studies that do examine the influence of academic achievement on decisions to enroll in TVET are ambiguous and vary by context and type of TVET. In a study conducted by Mathematica (Agodini et al., 2004) in the U.S., findings showed that students with lower academic achievement (and low educational aspirations) were more likely to enroll in high school TVET than otherwise identical students. The study also found that controlling for academic achievement, participation rates were similar for African American and White students, while Hispanics were less likely to participate. But in studies outside the U.S., contrary findings have been reported. Aypay (2003) compared the determinants of enrollment in secondary academic schools versus secondary vocational schools amongst a convenience sample of 873 students11 and found that students with higher academic achievement (measured as prior GPA) were more likely to enroll in vocational schools than in general academic schools. Although the bias in the sample due to nonrandom selection and a high nonresponse rate raise some questions about the trustworthiness of his findings, similar results were reported in the case of Thailand (Moenjak & Worswick, 2003). This study used nationally representative data to examine factors related to participation within an econometric framework. Using a probit choice model, the authors found that academic achievement was positively and significantly related to upper secondary TVET enrollments for males (but not for females), controlling for other household and regional characteristics. While the association between achievement and postsecondary enrollment is by and large positive and significant at the postsecondary level, it varies by type of TVET. In Australia, TVET options at the postsecondary level include traineeships, apprenticeships, and TVET programs offered by public and private institutions. The latter offer a wide range of TVET options corresponding to various levels of certification from lower level certificates to advanced diplomas (Curtis, 2008). A study of these programs shows that students of lower academic ability (measured by skills in literacy and numeracy) are more likely to enroll in apprenticeships, traineeships and programs offering lower level certificates. But entry into TVET programs offering higher level certificates is associated with students of higher ability and aspirations (Ainley, 2005; Curtis, 2008). These findings suggest that the role of educational attainment as a determinant of TVET is more complex at the secondary level than at the postsecondary level, and should be examined in relation to other contextual and economic indicators. Most studies looking at the relationship between household income, educational pursuits, and labor market outcomes have found household income to exert a positive, although small, influence on enrollment decisions (Behrman & Knowles, 1997; 1999; Behrman et al., 1994; Duraisamy, 2002; Psacharopoulos, 1989). However, the true effect of household income on TVET enrollments has been difficult to isolate and studies show ambiguous results (Foley, 2007; Perna & Titus, 2005; Sandefur et al., 2005; Teese & Walstab, 2008). Thus, although household income is an important demand-side determinant, it must be examined carefully. There are several challenges in establishing causal relationships between family income and various educational outcomes including enrollment. In their review of over 40 studies, Behrman &

Knowles (1999) noted that the main issues are endogeneity and multicollinearity. Because household income is correlated with unobservables such as parents' preferences towards human capital investments, OLS estimates of household income are likely to be biased (Mani et al., 2009). Behrman and Knowles (1999) find that most studies examining the effect of household income on human capital investments also include other household characteristics (parents' education, school characteristics, and so on) in the model. Since these variables are likely to be correlated with household income, the estimates on income could again be biased downward. As a result, some studies have used instrumental variables in an effort to address the endogeneity of the income variable. In most cases, these studies confirm that the OLS estimates for income are downward biased (Glewwe & Jacoby, 1995; Pal, 2004; Chaudhury et al., 2006). Amongst the TVET studies reviewed, Sandefur et al. (2005) used a sociological framework to examine the influence of family resources, specifically parental education and family income, and aspects of social capital as determinants of enrollment in certificate courses, 2-year College, and 4-year college in the United States. The social capital indicators included family structure, number of siblings, parent expectations, parent-child discussions regarding school activities, intergenerational closure, and Catholic school attendance. Results showed that students from high-income households have a higher probability of enrolling in 4-year college and a lower probability (although positive and significant) of enrolling in certificate programs and 2-year colleges. The study also found that the effect of household income diminishes when social capital indicators are included in the model. Similar evidence was found by Perna & Titus (2005) in their examination of 2-year and 4-year college enrollment. The coefficient on household income was positive and significant for 2-year college enrollments. Parents' education is consistently identified in the literature as an important predictor of human capital investment decisions (Behrman & Wolfe, 1987; Birdsall, 1982; Lillard & Willis, 1994; Tansel, 2002). Further, maternal and paternal education appears to have slightly different effects on the education and training decisions for boys and girls (Behrman, 1999; Birdsall, 1982; Dostie & Jayaraman, 2006). The findings from these studies are mostly consistent with each other and show that father's education positively influences enrollment decisions of both, boys and girls, while the education of the mother has a stronger positive influence on educational attainment of girls in the household. These differences have been explained on the basis of bargaining models

(Kambhampati & Pal, 2001) that argue that male and female heads have different utilities, and budget constraints, and thus make different decisions (Hoddinott, 1992). The role of parents' education specifically with regard to TVET enrollments at the secondary level has not received much attention. One reason may be that the role of parents or household factors diminishes at the postsecondary level in general. Nonetheless, the few studies that have examined the relationship have reported positive linear relationships between parents' education and TVET participation (Curtis, 2008; Fullarton, 2001; Moenjak & Worswick, 2003). However, Fullarton's (2001) examination of TVET demand in Australia found that as parents' education increases, students are less likely to enroll in secondary-level TVET. Social capital indicators are commonly included in models of educational outcomes (Dika & Singh's 2002) but not specifically in TVET research. The former studies typically show that social capital indicators are positively linked to enrollment in education and training (Aypay, 2003; Sandefur et al., 2005; Perna & Titus, 2005). However, Dika and Singh (2002) also raise conceptual and methodological issues that are important to consider when interpreting these findings. Of the TVET studies that examined the impact of social capital on TVET decisions, Aypay (2003) found that parent-child discussions about school were positively related to enrollment in academic schools and negatively related to enrollment in vocational schools; and parent guidance was negatively related to enrollment in both types of schools. Sandefur et al. (2005) found slightly different results. They modeled social capital indicators inside the family (family structure, number of siblings and parental expectations) and those outside the family (school changes, intergenerational closure, parental involvement in school activities and parent-school contact about academic matters). Results showed that after controlling for parents' education and income and students' prior achievement, parent expectations, parent-child discussions, and parent- school involvement improved the probability of TVET (as well as 4-year college) enrollments. Finally, Perna & Titus's (2005) study examined differential access to social networks across ethnic and income groups. Their results suggest that social capital indicators are not only positively associated with either 2- or 4-year college enrollment, but that the relationship between social capital indicators and enrollment is different for African American and other youth. Measures of parent-student discussions were less predictive of college enrollment among African-Americans than non-African American students, but measures of parent-school relationships were more predictive for African Americans than non-African Americans. The study also found a strong significant relationship between the volume of resources accessed via social networks at the school. The quality of education and training is considered an important supply-side factor expected to affect the demand for education and training (Hansushek, 1995; Kremer, 1995). Again, there is limited literature on this issue specific to TVET as opposed to education in general. However, overall, the literature generally supports the theory of positive associations between educational quality and enrollment (Birdsall, 1985; Glewwe & Jacoby, 1994; Tansel, 2002). Higher quality is associated with higher enrollments and early and timely enrollments. However, a major methodological challenge in this research is the fact that the quality measures may themselves be biased. The reason is that students of higher ability are more likely, than their lower ability counterparts who apply, to be selected into schools/institutions with more and better resources—a factor that can introduce bias in the coefficient estimate of the quality measure (Mani et al., 2009). Researchers have used Heckman's selection correction method to account for school choice and address this issue (Glewwe & Jacoby, 1994). Only Grubb (1988) has examined the influence of quality within a TVET framework. His measure of quality is the proportion of community college graduates receiving vocational degrees rather than degrees in general academic subjects. This measure is meant to capture the vocational differentiation available in the community college curriculum. The results of his study show that there is a negative relationship between the two variables. In the context of Grubb's study, the results imply that as the vocational content offered by a community college increases, students are less likely to enroll.

AN OVERVIEW OF TECHNICAL AND VOCATIONAL EDUCATION IN RAMAKRISHNA MISSION

Table-19 (Technical and Vocational Education institutions under the Ramakrishna Mission)

State	**Nature of the institution**	**Name of the Centres**	**Case Study done on**
Chhattishgarh	Technical Education	Narainpur	Belur Math (Saradapitha), West Bengal
Tamil Nadu		Chennai Students' Home and Coimbatore Mission	

Tripura		Agartala	
West Bengal		Belur Math (Saradapitha), Kolkata (Belgharia, Narendrapur and Rahara)	
Chhattishgarh	Vocational Education	Narainpur	Ranchi (Morabadi), Jharkhand
Jharkhand		Ranchi (Morabadi)	
Odisha		Hatamuniguda	
West Bengal		Belur (Saradapitha), Jayrambati, Kamarpukur and Narendrapur	

Narainpur, Chhattishgarh: Narainpur is the gateway to Abujhmarh Hills in Chhattisgarh. A 'marh' (Highlands) which is 'abujh' (unknown) is Abujhmarh. True to its name, it still continues to be rather unknown and unsurveyed an area. Surrounded on all sides by a chain of hills and dense forests, this vast tract of land stretching into some 4,000 Sq. Km. is the homeland of Abujhmarias one of the scheduled Particularly Vulnerable Tribal Groups (PVTG). The 'Abujhmarias' live in an inaccessible geographical terrain that remains cut-off from the rest of the world during the rainy season for almost six months. Because of their extreme geographical isolation for long, the Abujhmarias have very primitive economy, their mainstay being the slash- and-burn cultivation practiced on the steep hill slopes. The centre runs there a Tribal Youth Training Centre (Vivekananda Vanvashi Yuva Prashikshan Kendra) is a residential training centre which trains 24 tribal youths annually in the trades like health workers, horticulture, carpentry, tailoring, motor driving, vehicle maintenance, welding, electric wiring and fitting etc. Almost all the trained youths are employed in their respective trades. An Industrial Training Institute has been started since 1st October, 2012 initially with seven trades – Tractor Mechanic, Driver cum Motor Mechanic, Electrician, Welder, Mason, Draftsman and Computer Operating and programme Assistant (COPA). The Institute will be of sixteen trades in near future. An 'Agriculture Training-cum-Demonstration Farm' has been developed on a 52 Acre of land at Brehibeda, 2 km away from Ashrama. Tribal farmers are trained with modern techniques in preparing land, sowing, use of manure etc. They also undergo training in Dairy, Poultry, Duckery, Composite farming, Horticulture, Bee-Keeping and fishery. The Farm also conducts demonstrations in the farmers' fields to enrich their knowledge. Last year about 1378 tribal farmers were benefited through the demonstrations conducted by the Farm. As many as 30 Fish ponds were dug in nearby villages for the development of agriculture and fisheries in the area. About 35 training camps of short & long duration were also conducted in which about 2507 farmers were benefited. To provide the tribal villagers with fertilizers, seeds, medicines, pump-sets, spawn, fishing-nets etc. in time, an agro-business and service centre has been started with the help of Vivekananda Gram Seva Samity in the campus of our Agricultural Training and Demonstration Centre, through which till now about 2150 tribal farmers have been benefited. During the period from June 2008 to July 2012 we ran N.A.I.P.(National Agricultural Innovation Project) project financed by I.C.A.R. in two villages - Pusagaon and Palki. Its main objectives are; i) Value chain on food products from small millets. ii) Improving Rural Livelihood Security through sustainable integrated Farming System Model and allied Enterprises to alleviate economic status of the poor villagers by generating income and employment and also to bring rapid and sustainable transformation in agriculture of this area with minimum dependence on external inputs while conserving the natural resources. A Community Hall is built at the farm to establish linkage with the farmers and to assist them with the modern technologies, strategies and innovative solutions. Further stop-dams and lift irrigation units were constructed to provide irrigation facilities to the farmers. Creation and maintenance of infrastructure facilities in the interior villages is an important component in improving agricultural yield of the tribal villagers. To protect the farmers' fields from stray cattle 21.500 kilometers wire-fencing with pre-cast concrete poles was constructed. The Ramakrishna Mission Ashrama, Narainpur conducts exposure visits for the farmers and Trainees to different Research farms, Agriculture Colleges, Agro-based Industries in other districts and states to gather more knowledge in Agriculture in particular. Meetings and field visits are conducted in the villages to bring about awareness among the farmers regarding green revolution, composite farming, scientific & economical farming methods, poultry, fisheries etc. To encourage the villagers we distribute free seeds, fertilizers, spawn, chicks etc. to the BPL farmers. Every year we organize „Kisan Mela" exhibiting modern Agriculture tools and equipments, Agriculture products, Animal husbandry products and holding meetings in which Agriculture Scientists on different issues of Agriculture and mixed Agriculture. The Mela is usually organized in the Ashrama campus in which more than 10000 farmers participate. A total number of 67 Vivekananda Gram Seva Kendras have been started in the interior villages to inspire the tribal farmers to take up active farming and to develop the Agriculture extension activities. Through these Seva Kendras so far 1535 tribal farmers have been benefited. A follow up meeting is held every month in which at least three members of VGSK, agro-scientists, govt. officials and bankers participate to discuss the progress of extension activities, and through discussion, new strategies with innovative solutions are adopted. At present due to our incessant effort and training they are also cultivating Rice, Mustard Oil Seed, Maize, vegetables and a few other types of grains.

Chennai Students' Home, Tamil Nadu: Ramakrishna Mission Students Home, Chennai, is serving more than 670 orphan and poor students with free education, food and accommodation. It has three free educational institutions -- a Residential High School, a Residential Polytechnic College and a Primary Day School. Students Home was started in 1905 by Swami Ramakrishnananda, a direct disciple of Sri Ramakrishna. The Students Home takes care of poor orphan and destitute boys selected mostly from remote rural areas.Students stay in the Orphanage Home and study in High School and Polytechnic College. Currently there are about 670 students in residence. The Orphanage Home inculcates character building and man making education to its students and thus able to produce citizens of high calibre every year. Early in the life of the Home it was realized that students with only academic achievements found it difficult to get a job soon after completion of their studies. To help them secure some skills, manual training was introduced as part of the High School curriculum. This comprised of carpentry, weaving and rattan works. To help boys who could not even complete their matriculation, workshop practices such as smithy and foundry were introduced as early as 1925. In 1930, as part of the silver jubilee celebrations a workshop was constructed with the opening ceremony done by then Governor of Madras, Sir Frederic Stanley. In 1932, the then Secretary Sri Ramanujachariar secured the permission of the Government of Madras and with commendable foresight started a licentiate course in Automobile Engineering. Initially it was a five year course and the Home students who secured this diploma were in great demand in the Department of Transportation not only in the then Madras

Presidency but all over India. Later in 1949 on the advice of the Government of Tamil Nadu, this course of study was converted to a three year diploma course in Mechanical Engineering (DME). Automobile Engineering was taught as an elective subject in a post diploma course for 18 months. In 2005, as part of the centenary celebrations of the Home it was decided to introduce 2 more diploma courses, Diploma in Computer Engineering and Diploma in Automobile Engineering besides the existing Diploma in Mechanical Engineering. Government permitted DAE & DCE courses as unaided courses. The sanctioned strength for each course is 40. Besides 20% of the intake was allowed as lateral entry in 2nd year from applicants who passed 10+2 examinations. Thus total students' strength in the Polytechnic College is 408.

Coimbatore Mission, Tamil Nadu: The Polytechnic College was founded in 1956 as a wing of the Rural Institute, called the School of Engineering, under the National Council for Rural Higher Education. In 1974, the Institute was affiliated to the State Board of Technical Education and Training, Government of Tamilnadu. It is since its inception the college has made remarkable achievements and last year it was certified as an ISO 9001 2000 institute. The college is committed to provide quality educational services lays special emphasis on all-round development of personality by inculcating values, both secular and spiritual, in the student the wholesome education which is intended to provide a character building and man-making education is to produce enlightened citizens of our country. The courses offered are: Diploma in Civil Engineering, Diploma in Mechanical Engineering, Diploma in Electrical and Electronics Engineering, Diploma in Information Technology. The institution is recognized by the AICTE and enjoys autonomous status since 1983. Medium of Instruction is English. Candidates belonging to other states are also eligible to apply. The computer department has internet facility open to students and the staff. Basic computer training is provided to all the students. Physical education is a part of its autonomous curriculum.

Tripura Agartala: Ramakrishna Mission Educational Complex was established in the year 1990 at Viveknagar, Agartala,Tripura (W). It consists of two units, e.g. one High School (higher Secondary school from class 3 rd to 12th standard, affiliated to the CBSE, New Delhi and one Vocational Training Centre (VTC) were established with the intention of imparting employment oriented vocational training to those youths who could not acquire general education up to Madhyamic standard. In the year 2010 Government of Tripura accepted our proposal to up-grad the existing VTC into ITI. We are happy to announce that from August, 2013 we have started courses in trades like Plumber, Electrician, Refrigeration and Air conditioning. This Industrial Training Institute is set up under the Craftsmen Training Scheme which is affiliated to National/State Council for Vocational training (NCVT/SCVT), New Delhi/Tripura through the Directorate General of Employment and Training (DGE&T), in the Ministry of Labour, Government of India, New Delhi. Training, leading to development of competency and skill based upon the current need of the industry. The aims of the institution are as follows:

*Maximum practical orientation during training through repeated practice and improvement.

*Encouraging students' innovation through assignments and projects.

*Real time exposure in ongoing projects.

*Dynamic acquaintance with technological developments in the field.

* Personalized care by Faculties.

* Individualized assessment for imparting personalized tutorial.

* Application of modest instructional tools and techniques.

* To introduce at least 3 new most sought trades of the nearby industries.

*To expose students to minimum of three companies as industry inter phase program.

* To develop skills, keeping in mind emerging occupations and changing nature of work as a result of technological changes and workplace processes, to enhanced employment - self employment potential of the youth.

* To supply skilled manpower to Industries as per their need.

* To develop employment self-employment oriented Vocational skills among illiterates, school dropouts, workers in unorganized sector, candidates registered in employment exchanges, self-help groups irrespective of their age and educational background, to make them self-reliant.

* To make the Institutions more responsive and proactive, with regard to the kind of suggestions and recommendations made by the Industries, to develop constructive partnership between Industry and Institute.

* To offer training for the various high end and low end activities in the Industry base sector and Service sectors.

* To restructure operation of Vocational Training to enhance the quality, utility and effectiveness in the context of changing technologies and requirements in the labor market.

* To reduce the burden of unemployment.

The Centre follows the curriculum and syllabus guidelines provided by NCVT. All HOD's are responsible for keeping up to date on the changes/guidelines suggested by the NCVT from time to time. The changes as advised are recorded and the additional resources like faculty, equipment, tools etc. is recorded and forwarded to the Institute Management Committee for its approval. In case of an urgency which requires immediate action to meet NCVT guidelines, the head of the institution is authorized to make purchases with information to all members of IMC. The curriculum of the trades for which the institute is affiliated is assessed every time before the start of the session by the IMC and any amendments required are carried out prior to the start of the session. The curriculum of each trade is published in the brochure for admission and put up on Institute website.

Saradapitha, Belur Math, West Bengal: Ramakrishna Mission Samaj Sevak Sikshan Mandir an unit of Ramakrishna Mission Saradapithawas established in the year 1986 as a residential training centre of rural youth. It enshrines a goal to impart free residential training on social work with appropriate rural technology primarily on agriculture and allied activities and enventually to emerge as a vocational training centre for self-employment and rural development. In the year 2007-08 this Institute entered into a tie-up arrangement with United Bank of India and NABARD to act a RUDSETI (Rural Development & Self-employment Training Institute) type institute for conducting various training programmes under Joint venture of three organizations on equal cost sharing basis. Under the new arrangement the residential core training programme of 10 months' duration of the institute has been renamed as 'REDP' (Rural Entrepreneurship Development Programme). Alongside a number of non-residential "Skill Development Initiative" (SDI) off-campus training programmes extending vocational training facilities to unemployed youth in rural areas has also been introduced. Training courses includes both in-house training and field placement. Subject specific disciplines, interalia, include Agri-Horticulture practices, Poultry farming, Duck rearing, Pisciculture, Ornamental Fish Cultivation, Animal Husbandry & Animal Health Care, Apiculture, Aviculture, Mushroom cultivation & Spawn culture, Vermi-culture & Vermi-composting, Food Processing, Basic Computer Training etc. along with Environment & Sanitation, Primary Health Care, Agriculture Extension. Entrepreneurship Development, Social Studies and Organisation Building. For practical training & wider exposure the trainees visit the centres of excellence (field placement) for respective activities for a week or couple of weeks. The Dept. of Agriculture, Govt, of West Bengal has recognized this institute as a resource centre for training of farmers at large. Ministry of Rural Development, Govt, of India vis-a-vis National Advisory grading "A" amongst all RUDSETIS in the country for the year 2011 -12. The ex-trainees visit the institute as and when necessary to seek advices of the institute's faculties regarding various issues encountered by then in their ventures. Reciprocally resource persons of the institute pay occasional visit to their respective villages to address their needs. Necessary arrangements for financial assistance by wat of loan from its own 'Self Employment Fund' created for the purpose and linkage with bank for project oriented funding have been made. Resultantly, hundreds of ex-trainees themselves are not only financially established, in turn a large number of employment provisions for local youths have been created in their venture. Pursuant to directives of Reserve Bank of India/NABARD, a FLCC has been set up by UBI within the premises of the institute to facilitate propagation of information and knowledge relating to various financial service products of banks for the benefit of general mass and the trainees of the institute in particular.

Ramakrishna Mission Shilpayatana, a government sponsored Industrial Training Centre (TTC), was started in 1963 in the vicinity of Bclur Math to impart technical education to our youth for being employable in industry. Most of its students are from rural areas of Hooghly, Howrah and Midnapur districts. The institution runs four m trade courses, viz. Electrician, Fitter, Turner, all of two year duration, and Welder (Gas & Electric) which is of one year duration, under the Craftsman Training Scheme (CTS) of Directorate General of Employment & Training (DGE&T), Ministry of Labour, Government of India. The courses are affiliated to die National Council for Vocational Training, New Delhi. Admissions are made in the months May-June of every year. On completion of the course, most students get Apprenticeship under the Apprentices Act, 1961, in industries where they earn the National Apprenticeship Certificate (NAC) at the completion of one year. 72 students were trained in 2011-12. Two short term courses in Electrical Sector following the Modular Employable Skills (MES) courses under Skill Development Initiative Scheme (SDIS) of Government of India with NCVT certification are also conducted. 8 students were trained in this year. Two 10+2 Vocational courses are also conducted in the form of (1) Maintenance and Repair of Electrical Domestic Appliances (MRED), and (2) Computer Assembly and Maintenance (CAAM), affiliated to the West Bengal State Council for Vocational Education and Training (WBSCVE&T), a statutory body under the West Bengal State Council of Vocational Education and Training Act, 2005. This course is intended to introduce vocational education for students who later wish to pursue a career in the technical line. Students who pass out also have opportunities for higher studies in Polytechnics and graduation in Major/Pass courses. 87 students were enrolled in these courses in the year 2011-12. Apart from course curriculum, a few factory visits are conducted for the ITI students. Students also take part in extracurricular activities like sports (cricket, football and volleyball), Annual Social Function including drama and publication of the institute's yearly magazine Shilpayatana Patrika, in Vishwakarma and Saraswati Pujas of the institute, as volunteers on special occasions in Belur Math like the Tithi Pujas of Sri Ramakrishna, Sri Sri Maa Sarada Devi and Swami Vivekananda, and also as participants in the Prabhat Ferry organized on these occassions. All these help to develop a disciplined and all-rounded personality in the students within the span of their training.

The Ramakrishna Mission Shilpavidyalaya, an Industrial Training Centre, established in 1921, is the first of its kind in the technical field, giving shape to educational ideas of Swami Vivekananda. At present this Institute gives vocational training in the following trades to under privileged students of rural and urban areas (Total-177), who have passed the secondary examination and are unable to proceed further. Four

N.C.V.T. (National Council for Vocational Training, Govt, of India, New Delhi.) affiliated courses of two years duration: Draughtsman (Civil) with Auto CAD, Draughtsman (Mech.) with Auto CAD, Electrician, and Electronics Mechanic. Three Non-N.CV.T. courses of one year duration: Plumbing & Sanitation cum Electrician, Electrical Equipment Repairing & Maintenance and Electronics Equipment Repairing & Maintenance. Apart from this daily Prayer & Spiritual classes are held in our Prayer Hall. Annual cultural competitions such as Speech, Essay, Recitation & Quiz etc. on the lives and teachings of Sri Ramakrishna Deva, Sri Ma Sarada Devi & Swami Vivekananda, Vishwakarma Puja, Saraswati Puja and other cultural programs are held every year. A wall magazine "ABHF is also published periodically by the students of different trades. Annual Football, Cricket & Volley Ball tournament and also Annual Sports among the students are held. At the Annual Prize distribution ceremony, held every year, prizes are awarded to the students for their Academic excellence and the above co-curricular activities. Technical Scholarship & Stipend are provided every year to some poor but meritorious students. After passing out most of our students are engaged with jobs in different industries or further training or studies.

Belgharia, Kolkata, West Bengal: Ramakrishna Mission Shilpapitha is a Government Sponsored Polytechnic managed by Ramakrishna Mission Calcutta students' Home, Belgharia, Kolkata-700056, focused to impart technical education mainly to the poor village students as wished by Swami Vivekananda. Our Shilpapitha is recognized by West Bengal State Council of Technical Education and All India Council of Technical Education. In our institute three-year (six semesters) diploma courses in Civil Engineering, Mechanical Engineering, Electrical Engineering and Electronics & Telecommunications Engineering are offered. Total number of students is nearly 650. Two third of our students are from villages and many of them are from needy and distressed family. Since the first batch in 1961, our institute helped many students to be knowledgeable diploma engineers with strong values and ethics. Like all the educational institutions managed by Ramakrishna Mission very good academic ambience in the institute. The teachers are very sincere and as a result our students attain depth in technical knowledge. Almost every year our students get gold medals from West Bengal State Council of Technical Education. The institution believes that developing young men of strong moral character is the only solution for the regeneration of India as envisaged by Swami Vivekananda. Along with their academic studies it tries to induce in the students' character qualities like honesty, dedication and sense of commitment. Many of the students get chance to participate in Flood Relief, Cyclone Relief, Distress Relief, etc. conducted by the Ashrama and thus inculcate the spirit of Unselfish Loving Service to the poor and downtrodden masses. As a result students of our polytechnic have been found to be loyal and dependable employees, which no mere salaried employee-awareness can ever confer. The institution has one of the best training and placement cells among all the polytechnics of West Bengal, which ensures placement to nearly 90% of our students. Companies like Tata Steel, Tata Motors, Tata Cummins, Asia Brown Brewery, Shapoorji Pallonji & Co. Ltd, Larsen & Tubro Ltd., etc. regularly visit the campus. It is committed not only to provide technical education to poor village students, but also it is made sure that they could get a placement at the end of their course

Narendrapur, Kolkata, West Bengal: Ramakrishna Mission Ashrama, Narendrapur provides training in National Council for Vocational Training (NCVT) recognized Mechanic Motor Vehicle certificate course. It is known as well for providing free or sponsored training to school dropouts in association with various private and government agencies. It keeps pace with the modern developments in motor industry and offers training. Not only that, this Centre operates also a registered Motor Driving in order to achieve driving licenses. Being properly trained, many poor trainee achieve placement with reputed concerns, such as ONGC and TATA Motors. Besides, as part of Toyota Technical Education Programme(T-TEP), Toyota Kirloskar Motor Pvt. Ltd. Offers advanced training on its products, with a view to absorbing them in their Dealer's Workshop. The Automobile Training Centre is affiliated to NCVT. The Directorate of Industrial Training, Technical Education & Training Department, Govt. of West Bengal. Controls examination and issues certificates for its course. The RKMITC is a branch of Ramakrishna Mission Ashrama, Narendrapur. This Ashrama has its services open to all irrespective of caste, creed and nationality, its special field being education. The institute is intended to provide technical training in both theory and practical subjects to young boys in various trades such as: WELDER, PLUMBER* for one year duration (2 semesters), Turner, Electrician, Draughtsman (Mechanical), Refrigeration And Air Conditioning Mechanic, Fitter And Mechanics

Motor Vehicle* For Two Years Duration (4 Semesters). After successful completion of the training the trainees are eligible for employment in Government and private sector establishments. The institute conducts two short term vocational courses under the aegis of West Bengal State Council of Vocational Education and Training (WBSCVE&T). The trades are: 2/3 Wheeler Mechanic, Electrical House Wiring and Motor Winding.

Rahara, Kolkata, West Bengal: The Ramakrishna Mission Boys' Home, Rahara was established in 1957. The Junior Technical School is one of the most important units of the Boys' Home. Formerly it had been running a 3-year course in different Engineering Trades open to Class VIII passed students in the age group between 14 and 17 years leading to the Junior Diploma in Engineering awarded by the State Council for Engineering and Technical Education, West Bengal. The School has been renamed as "Ramakrishna Mission Industrial Training Centre' with effect from 1st April, 2003 as per order of the Department of Technical Education, Govt. of West Bengal. In place of the above course, the following Trade courses have been introduced in the school with effect from August, 1990: Two year course in Turner, open to Madhyamik passed candidates, Two-year course in Electricity, open to Madhyamik passed candidates, One-year course in Welding, open to Class VIII passed students.

A higher Secondary Vocational Institute in the Technical Stream under the new pattern of the two-year Higher Secondary Course got its start from the year 1976-77. The students are being trained in the following Courses: Mechanical Servicing and Maintenance, Electrical Servicing and Maintenance and Automobile Servicing and Maintenance.

A Vocational School is run with a view to offering to students, who do not show sufficient aptitude for general education, some facilities for mastering a trade which may-enable them to earn a livelihood when they leave the Home. At present there are arrangements for training in following trades: Carpentry, Tailoring, Electrical Maintenance & Repairing, Offset-Printing, Composing & Book-binding, Electronics (Radio + T.V. Maintenance + Repairing). The Carpentry and the Tailoring courses are for 3 years, others are for 2 years' duration. On completion of the training the students are given a certificate, which enables them to find jobs in industries and other establishments. They may also make an independent living by the use of their technical skill. The garments worn by the boys are tailored at the Tailoring Section.

RAMAKRISHNA MISSION SHILPAMANDIRA: SELECTING THE CASE AND ITS PROFILE

The Ramakrishna Mission Shilpamandira under the Ramakrishna Mission Saradapitha was initially a Govt. sponsored Engineering School which was converted to a Polytechnic offering Civil, Mechanical and Electrical Engineering Diploma to young men of Bengal since 1954. After passing through difficult times in the turbulent history of Bengal, in 2007 it became a Self-financing Polytechnic with intake of 220 students, in Civil Engg (60), Mechanical Engg (60). Electrical Engg (40) and Electronics Telecom Engg (60) located in a 6'/2 acres property with 8600 sq.m. carpet area. It has well equipped Workshops, Labs, Drawing Halls, Library (20000 books), Learning Resource Centre and other facilities.It has a track record of 100% campus interviews and students standing toppers in every diploma exam in every department held by West Bengal State Council for Technical Education (WBSCTE) and is approved by All India Council of Technical Education, New Delhi. Its rigorous Personality Development training of every student with prayers, meditation, readings from Swamiji, Presentations, Competitions, Mock Interviews, Seminars, Industry visits, Vacational training, Study tours, Aptitude tests, Games etc. has fetched itself acclaim in public and industries.Swamiji wanted common Indian to be skilled like in western countries so as to make him/her self-employed. Under the aegis of Shilpamandira at its other one acre property near Tattwamandira a Community Polytechnic scheme of the Govt, of India started in 1989 with activities like skill training, technology transfer, technical services to villages with a number of extension centres. In 2007 it was converted to Community Training Centre (CTC) presently giving hands on training in 8 trades like welding, machining, auto repair, AC repair etc. for about 600 trainees a year. All courses are accredited by West Bengal State Council for Technical Education (WBSCTE). In tune with times and with 2 computers, 1 printer a self financed Computer Centre (CC) started its journey in 1993 under Community Polytechnic and presently it has 200 computers & other facilities offering one man one machine state-of-the-art training in 14 courses, accredited by WBSCTE for over 1400 trainees a year.Both CTC & CC projects of Shilpamandira conduct corporate training for Industries & Govt, agencies.

CONDUCTING FIELD WORK

The field work was participatory in nature. The researcher visited the Ramakrishna Mission Shilpamandira in working days from September 12, 2016 to make thorough interaction with the authorities and the various functionaries, including beneficiary students, teachers, members of community and non-teaching staff on the variables and aspects of the study.

OBSERVATIONS ON KEY ASPECTS

Academic Climate:

In the emerging world of technology, technicians are getting greater freedom, and responsibility, to take independent on-the-spot decisions to perform multi-faceted tasks. A deep understanding of the fundamentals of science and engineering is the foundation which gives the necessary background to assess the different situations and take independent technical decisions. The only way to obtain depth and competence in technical skill is through a thorough drilling in labs and workshops. The institution gives individual attention to ensure that each student gets comprehensive hands-on training in the labs and workshops, the necessary theoretical inputs as well as the attitude and aptitude for continuous learning which is invaluable in the fast-changing technological scenario of today's world. Challenges draw the best out of an individual. There is the thrill of problem-solving and the pride of victory in overcoming difficult situations. Even in educational institutions, students manifest their creative talent and consolidate the skills learnt when confronted with challenging Projects. Reverse engineering is used as a learning-aid as also the starting point in exploration for innovative improvements. Time-management, material-management are skills truly learnt only in a work-environment. Such professional skills are the essence of competence. Each semester, students may be required to participate in Industry standard projects under simulated work conditions for their competency enhancement. Unlike in a written test where time is available for thinking, a technician in the field has to take on the spot decisions and be able to explain the rationale involved in his decisions. This aspect of thinking on one’s feet can be best developed by participating and presenting ones work in seminars. Technical seminars will be held each semester, where student deliver presentations on topics decided in consultation with the faculty. The institution offers 3 year Diploma in Civil Engineering, Mechanical Engineering, Electrical Engineering and Electronics & Telecommunication Engineering

Library:

The seat capacity of the Library is 125. students. Total number of Books are 24135 among which Reference Books are 4647 and Text Books are 19488 in number. Number of Computerized Books are 16250. Monthly Shilpamandira News Display on the Notice Board. Some Journal and Magazine Display on Journal Almirah. Eight computers are available in the Library for the students and three computers for Staff. E-Learning and Internet facilities are available in the Library.

Following Journals & Magazines are available in the Library for the students:-

Indian Journal of pure & Applied Physics.

Educational World .

Bhavan's Journal .

Safari.

Science Reporter.

Power Line .

Buildotech.

Human Capital .

Electronics for You.

Indian Foundry Journal.

Journal of Structural Engineering.

International Journal of Applied Mathematics and Engineering Sciences.

Annals of Library and Information Studies.

The Indian Concrete Journal.

Journal of the Institution of Engineers (India) : Series - A

Journal of the Institution of Engineers (India) : Series - B

Journal of the Institution of Engineers (India) : Series - C

Residential facilities:

The institution has no Residential facilities.

Other facilities:

The following are the facilities provided by the institution:

Workshop Complex (Carpentry Shop, Welding, Fitting Shop, Pattern, Mechanical Shop), Computer Facilities, Laboratory Facilities (Physics, Chemistry), Language Lab, Pre Placement Grooming, Value Orientation, Playground & Common Room, Canteen, Placement Cell

Co-curricular Activities:

A strong personality is the basis of all excellence. To have deep convictions and the strength to follow them; to be able to work in a team, adapting to situations while not compromising on the fundamental values; to have professional pride and self-respect, and the necessary quality-consciousness and vision.
All these things must be inculcated and developed through conscious effort. Towards that end it is necessary to do regular introspection and orientation towards the Source of all energy, latent in the heart of each one of us. This is achieved through prayer and meditation sessions every day. Meditation not only clears one's doubts and makes mind focussed, it also gives a sense of well-being and strength born of character.

Along with technical skills, soft-skills are needed for successful careers in today's workplace. These include verbal as well as written communication, involvement and productive participation in group discussions, initiative, and, body language and attitude that put colleagues at ease and instil confidence in the customer. Students will be sensitized on a variety of these aspects so that they would be able to face the world boldly and with assuredness.

Collaborative activities such as Group discussions will be conducted for understanding group dynamics and developing Team Building skills. Students will be required to participate in co-curricular activities such as sports, technical exhibitions, quizzes, seminars etc. organised for sake of their overall development.

The 1st year students of all four streams (DEE, DCE, DME & DETCE) of Ramakrishna Mission Shilpamandira are motivated to participate in presenting topic of their choice. They are given the option to select any 1 topic from the given list of topics. The topics are given from all subjects taught to them in the 1st year. This is an effort from the part of the institution to develop personality of the students. Personality development is an essential part of the all round development of a man. The winners are awarded prizes.

The 2nd years students of all streams are inspired to compete among themselves to test their general knowledge awareness. Questions from current affairs on different subjects are asked by the concerned department teachers. The programme is aimed at making the students realize their potential in general knowledge and the need to upgrade themselves. The winners are awarded prizes.

The 3rd year students of all streams are encouraged to face interview sessions through mock or simulated interview. It is a mock personal interview session in which the students are the interviewee and the concerned department teachers are the interviewers. This venture is aimed at building confidence among students to face real interview sessions at the time of their campus selection. Questions from technical and non-technical fields helped the students to assess real situation during an interview.

RAMAKRISHNA MISSION ASHRAMA, RANCHI MORABADI: SELECTING THE CASE AND ITS PROFILE

This centre at Morabadi was established in 1927 by Srimat Swami Vishuddhananda (the eight President of the Ramakrishna Order) as a branch centre of Ramakrishna Mission. In early Sixties when Ranchi and its adjoining district were in the grip of severe drought, Ramakrishna Mission Ashrama, Morabadi, organised a relief work for the distressed poor. During that period it was strongly realized that unless the poor and illiterate farmers are trained in need based agriculture and allied technologies supported by group action they cannot be made self-reliant and also would never be able to counter similar adverse condition in future. In order to fulfill the above requirements ‘Divyayan’ (meaning Divine Way) a novel integrated rural development model was conceived and launched by this centre in 1969. A residential training centre for tribal and rural youth in agriculture and its related activities was started in 1969 under the name Divyayan. In 1977 Divyayan was recognized by ICAR to establish and run a Krishi Vigyan Kendra. For the period 1996-97 it was awarded as the best KVK.

CONDUCTING FIELD WORK

The field work was participatory in nature. The researcher visited the Ramakrishna Mission Ashrama, Ranchi Morabadi in working days from November 5 to November 6, 2015 to make thorough interaction with the authorities and the various functionaries, including beneficiary students, teachers, members of community and non-teaching staff on the variables and aspects of the study.

OBSERVATIONS ON KEY ASPECTS

Academic Climate:

The Ramakrishna Mission Ashrama, Divyayan has adopted six major objectives for integrated development of the rural tribal people since its inception on 1969. Divyayan Training Unit houses different laboratories and spacious class room with audio-visual facility to build scientific temprament in the trainees, Divyayan has state-of-the-art laboratories like Soil and plant testing lab., Honey Testing Lab., Plant Protection Lab.,Mushroom Production Lab., Bio-Fertiliser Lab., Tissue culture lab. etc. Educational objectives is achieved by creating opportunity for the Rural children right from illiteracy to neo-illiteracy. Basic Education (Primary and Middle) Secondary and Sr. Secondary through National Open Schooling, Vocational Education through national Open Schooling, Education to prisoners, Integrated MSc course in integrated Rural and Tribal Development as the faculty of IRTDM, Ramakrishna mIssion Vivekananda University. Local youth of adopted areas are also encouraged to open public school in village itself.

Agricultural-cum-horticultural Demonstration Farm: There are three agricultural-cum-horticultural farm at Divyayan, Getalsud and Maheshpur. These farms are for demonstration on maximization of yields, comparison of orchards, dryland agriculture (Particularly pulses and oil seeds)etc.

Progeny Orchard: A progeny Orchard has been developed in the Divyayan campus for the demonstration and training in Mali training and horticulture training. The orchard consists of different varieties of tree like Mango, Amla, Guava, Litchi, Coconut, Barry etc.

Mushroom Training Unit: This unit has been added in 1993. Along with the training, arrangements have been made to supply commercial spawn to the trainees for adopting production of mushroom as a cottage industry. During 2007-08 unit produced 4745 packets of spawn for distribution/sale and it produced 221.35 kg.

Poultry: Poultry farm demonstrating various methods of rearing poultry birds; broilers and layers. Divyayan KVK has developed a cross breed; (cross of local breed with Rhode Island Red) called "Divyayan Red" (DR) which is very popular in this area. The bird lay 150 eggs under village conditions against the local birds laying only 50-60 eggs in a year, and are resistant to diseases. Divyayan has installed incubator with hatching capacity of 2700 Divyayan Red eggs at a time, for propagation in the villages.

Dairy: Dairy Unit with 58 heads of exotic cattle provides opportunity to the trainees to learn about Cross breed cows: rearing and management, feed Preparation, AI service for breed improvement, Supply of input - cow dung to bio-gas plants, Fodder production and trials, Marketing of by-products,

Artificial Fish Hatchery: An artificial fish hatchery has been installed for training and demonstration purpose for the trainees of Fisheries to make them aware of the technology involved in producing fish fingerlings.

Fish-cum-Duck: For training and demonstration purpose a fish –cum-duck unit has been created

Apiary Training Unit: A mini unit at bee-boxes and hives for training (even though small) serves the purpose of training farm-boys attending motivational as well as special courses. This unit of Divyayan KVK also extends the facility of marketing honey produced by participant farmers. During the year the unit has collected and sold more than 88.81 qtls of honey and 472 units of Bee boxes with bee colonies were made available to farmers. The major activity on bee-keeping and honey production is spread over to 26 out of 75 adopted villages of Ranchi district.

Soil-testing, Vermiculture, Bio-fertilizer Units: These units are there to motivate farmers to take up integrated nutrient management on the basis of soil tests. Farmers are advised to apply boron to cauliflower and other vegetables, sulphur to mustrad, molybdenum to pulses, zinc to mazie etc., in addition to major nutrients, depending on the status of these nutrients and crops to be grown. During the year 1192 soil samples were analyzed in t he laboratory and same number of farmers were given recommendation of fertilizer doses and they adopted the recommendation of fertilizer doses and they adopted the recommendation. The unit also distributed 3210 kg. of vermi compost and 16480 nos. of earth worm to farmers. Fast composting technology and demonstration BGA, Azola etc were also arranged.

Residential Facilities:

A 100 beded hostel is there to accomodate the trainees of various residential training programme on agriculture and allied subject.

Other facilities:

Workshop: Besides the agricultural production related endeavors, Divyayan also imparts training in the fields of farm machinery, welding, carpentry and lathe turning. Special training courses have been designed with income generation orientation which help the trainees to engage themselves in self-employment. In these courses which are practical oriented stress is also laid on demonstration and intensive hands-on experience to help the trainees in acquiring self-confidence for undertaking independent entrepreneurship

Computer Center: For storage, Processing and retrieval of large amount of data and also for publication of reports, news-letters etc., a well equipped computer centre is functioning. The centre has further been strengthened by addition of networking infrastructure and bringing all the computer under one intranet for sharing data and other resources. The centre has also been linked with internet for upgrading the knowledge of the training faculty.

Automatic Weather Station: An automatic weather station has been installed to record local weather data like atmospheric pressure, humidity, wind speed and rain fall. All the data gets recorded automatically and gets down loaded to computer at regular interval.

Video Conferencing System: A video conferencing system has been installed in the month of February 2002. Which has brought us more closer to the different agriculture Universities and technical institutions of India and abroad. Video conferencing is done over ISDN lines our ISDN numbers are (0651)2552470, 2551471, 2551472

Village Resource Centre: With the help of Indian Space Research Organisation 4 VRCs in 4 different Blocks (Angara, Bero, Burmu and Murhu) and one expert centre at Divyayan has been installed. Through this expert centre need based agriculture technologies are being disseminated to farmers though live discussion with KVK scientists or through audio visual programmes.

Economical: The economical objective is achieved through training the grass root level young farmers and school drop-outs, especially belonging to the tribal and the backward section of rural community, in modern technology applicable to the field of agriculture and allied areas with objective of achieving increased output per unit land area per family.

Social: The social objective is achieved by imbibing the spirit of community living, developing sense of co-operation, acquiring youth leadership qualities, instilling group action and self-confidence with a view to prompting national integration at all levels.

The Revolutionary Efforts by N.I.O.S. with the Object of Providing Education to All aiming at to provide education to those who are unable to attend conventional schools for a variety of socio-economic reasons, as well as to those who for similar reasons missed opportunities to complete school and developmental education, to meet the educational needs of differently able children, to provide wider choice of educational programmes to learners, to provide a 'safety net' to school drop-outs so that they do not remain under-educated. Open Basic Education (OBE) of NIOS is facilitated through the primary schools established by the Block level organizations, "Vivekananda Seva Sangh" formed by our ex-trainees under our guidance in remote villages, enrolling and teaching children to qualify up to class III,V and VIII under OBE .

Beside these, the Mission has started experimenting on (a) the method of teaching, (b) Vocational education and other relevant subjects needed to make self-reliant rather than becoming job-seekers, (c) Diversification of streamlines depending upon the interest of particular individual in respective subject or job, (d) Methods for improving the receptive tool (mind) for manifestation of perfection. From the very beginning i.e. from primary education children especially from rural area should have elementary knowledge about agriculture, horticulture and other concerned areas so that by the time they complete class VIII they learn sustainable farming so that they are able to become a good farmer and earn sufficient to lead a prosperous life. Ramakrishna Mission Ashrama is accredited Institution of National Institute on Open Schooling to enroll students of class III, V, and VIII in which we have included such vocational subjects. The activities helping to have practical experience up to class V is enclosed as illustration 3. In class VI to VIII different methods of cultivation is being taught.

Ramakrishna Mission Ashrama has introduced this unique system of education in 3 Primary schools run by the village level organization formed by its ex-trainees and it has already started showing its impact. Students are keenly taking interest in their subject. To avoid the burden of books and making learning easy in short time we have developed certain games through which children can learn alphabets and numerical; arithmetic etc. Illustrations are enclosed. Alphabets, words, names of persons, numerical, arithmetic etc. are taught with games, models, play, puppets etc. Identification of colors, geometric shapes through tools. While teaching lessons are being given in participatory mood so that children are interested and remain involved in the process of teaching.

Health Facilities:

Health care objective is achieved by organizing weekly medical camps, special medical camps, health awareness camps, total sanitation and drinking water awareness, creating and deputing Para-medical entrepreneurs and educating the people for participating in vaccination programmes, providing health care to the last person of the rural area.

Cultural Activities:

The cultural objectives is achieved by guiding and encouraging local culture based on the Indian ancient culture and local traditions.

Spiritual Activities:

The spiritual objective is achieved by spreading the doctrine of oneness of all souls toleration and acceptance of all faiths/religions and fostering universal brotherhood, non-sectarian approach and spiritual values in daily life to achieve the highest purpose of life

Innovation

Gravity irrigation: Divyayan KVK has developed a innovative system of irrigation. This innovative system is different from other system of irrigation as it uses force of gravity instead of pump or any other source of power to produce water flow. This system of irrigation is very cost effective, sustainable and requires very low cost of maintenance and is very suitable to hill terrains.

This system is very simple which consists of a reservoir or a small check dam near the mouth of the stream which is generally located on the hill top. The reservoir is connected to delivery tanks with pipes. Then the water is irrigated or used for drinking purpose by connecting the pipes to delivery tanks.

This Ashrama has created 6 such systems in Angara and Silli Blocks of Ranchi District and 3 more systems have been proposed and under the planning stage. All the existing systems have capacity to irrigate 50 ha to 100 ha of land depending on the size of reservoir built at the top of the hill.

- Features of the System:
    - Cost Effective
    - Sustainable and low maintenance cost
    - Simple and easy to replicate
    - Suitable for hilly terrain.
    - Water for irrigation is available round the year since the system is built on the mouth a perennial steam.
    - Effective way of soil and water conservation

FINDINGS

The Technical Education institutions run by the Mission are Polytechnic institutions in nature and give individual attention to ensure that each student gets comprehensive hands-on training in the labs and workshops, the necessary theoretical inputs as well as the attitude and aptitude for continuous learning which is invaluable in the fast-changing technological scenario of today’s world.

1. Technical seminars are held in each semester, where student deliver presentations on topics decided in consultation with the faculty.
2. In the institutions Reverse engineering is used as a learning-aid as also the starting point in exploration for innovative improvements. Time-management, material-management are skills truly learnt only in a work-environment as such professional skills are the essence of competence.
3. In each semester students are required to participate in Industry standard projects under simulated work conditions for their competency enhancement.
4. The institutions believe that a strong personality is the basis of all excellence, to have deep convictions and the strength to follow them; to be able to work in a team, adapting to situations while not compromising on the fundamental values; to have professional pride and self-respect, and the necessary quality-consciousness and vision.
5. The institutions of the Mission in the field arrange for regular introspection and orientation through prayer and meditation sessions every day towards realizing the Source of all energy, latent in the heart of everybody.
6. The Mission takes care so that the students get sensitized on a variety of these aspects so that they would be able to face the world boldly and with assuredness through including verbal as well as written communication, involvement and productive participation in group discussions, initiative, and, body language and attitude
7. Collaborative activities such as Group discussions are conducted for understanding group dynamics and developing Team Building skills. Students are inspired to participate in co-curricular activities such as sports, technical exhibitions, quizzes, seminars etc. organized for sake of their overall development.
8. The thrust areas of the Vocational Education run by the Mission are:

    a. Economical: The economical objective is achieved through training the grass root level young farmers and school drop-outs, especially belonging to the tribal and the backward section of rural community, in modern technology applicable to the field of agriculture and allied areas with objective of achieving increased output per unit land area per family.

b. Social: The social objective is achieved by imbibing the spirit of community living, developing sense of co-operation, acquiring youth leadership qualities, instilling group action and self-confidence with a view to prompting national integration at all levels.
c. Health Related: Health care objective is achieved by organizing weekly medical camps, special medical camps, health awareness camps, total sanitation and drinking water awareness, creating and deputing Para-medical entrepreneurs and educating the people for participating in vaccination programmes, providing health care to the last person of the rural area.
d. Educational: Educational objectives is achieved by creating opportunity for the Rural children right from illiteracy to neo-illiteracy. Basic Education (Primary and Middle) Secondary and Sr. Secondary through National Open Schooling, Vocational Education through national Open Schooling, Education to prisoners. Local youth of adopted areas are also encouraged to open public school in village itself.
e. Cultural: The cultural objectives are achieved by guiding and encouraging local culture based on the Indian ancient culture and local traditions.
f. Spiritual: The spiritual objective is achieved by spreading the doctrine of oneness of all souls’ toleration and acceptance of all faiths/religions and fostering universal brotherhood, non-sectarian approach and spiritual values in daily life to achieve the highest purpose of life.