21. PSS Central Institute of Vocational Education

Pandit Sunderlal Sharma Central Institute of Vocational Education, Bhopal—a constituent unit of the NCERT—is an apex research and development organisation in the field of Work and Vocational Education. It provides R & D and technical support to a variety of vocational programmes and advises and assists the Central and State Governments and Union Territory Administrations on the implementation of Vocational Education and Work Education Programmes in a professional manner through its six academic divisions.

UNESCO’s International project on Technical and Vocational Education (UNEVOC). The principal function of the Institute is to provide research, development and technical support and to advise and assist the Central and State Governments and Union Territory administrations on the implementation of Vocational Education and Training (VET) programmes. It functions as the technical wing of Joint Council of Vocational Education and the MHRD in all matters relating to vocational education and training. Its another function is to promote, supervise and guide the establishment of system for Vocational Education and Training at different levels i.e. national, state, district and institutional.

To realise its objectives, PSSCIVE develops curricula and instructional materials and conducts training, extension, research and evaluation related activities for strengthening the implementation of Vocationalisation of Secondary Education in 9583 schools with enrolment capacity of about 10 lakh students in the country. It formulates and maintains a networking of various types of institutions working in the area of Vocational Education and Training and other R & D institutions. Special programmes for the handicapped, women, SC/STs and minority community are organised. It also promotes and facilitates on-the-job training and apprenticeship training for the students of Vocational Education and Training. Generic Vocational courses at +2 stage for academic stream students are developed and tried out by the institute.

These activities are carried out in a professional manner through its six
The major thrust areas on which programmes were conducted during 2005-2006 include: research study in auto technician vocations; identification of vocational teachers’ entrepreneurial competencies; early childhood workforce and early childhood environment; development of vocational curricula; modularisation of vocational courses; development of National Vocational Qualifications in various fields; development of modular packages for certificate programme; development of instructional material for vocational courses; development of modules; training vocational teachers in different areas and orientation of key functionaries.

The Institute’s efforts were also directed towards promoting vocational education through interaction with central and state officials; publication of journal and quarterly bulletin and distribution of NCERT Awards for Best Practices in Vocational Education and Training.

MAJOR ACTIVITIES OF THE INSTITUTE DURING 2005-06

Research

A Study of the Pedagogy used by Ustads (Master Craftsmen) to train youth in skills in auto technician vocation in the informal sector: The study was intended to assess strengths and weaknesses in skill training provided by Ustads and to train children/youth in informal apprenticeship approach. The study was conducted by the faculty of the institute by visiting work places, interacting with the youth and their Ustads in Bhopal and Indore in Madhya Pradesh. The report is under preparation.

Identification of Vocational Teachers Entrepreneurial Competencies in the State of Tamil Nadu and Maharashtra: The objectives of the study were to identify and compare the existing entrepreneurial competencies of vocational teachers of these two States. The study is also expected to reveal the relationship between teacher’s competencies on the student’s career options, and to suggest measures for the healthy growth of vocational education programme in these States. Seven districts each from Tamil Nadu and Maharashtra were selected for this study. 120 vocational teachers working in the vocational institutions from the selected districts were interviewed for identifying entrepreneurial competencies. The report is under preparation.

Development

During the year the Institute has developed 10 modular packages for certificate programme (level 1) in the areas of Horticulture, Plant Protection, Fisheries, Seed Production and Agriculture Engineering. Instructional material on Elements of International Marketing for the Vocational course of Export-Import Practices and Documentation was developed. The Institute also developed National Vocational Qualifications in Insurance-based Vocations (level 1) and Office-related Occupations (level 1). It developed and finalised instructional-cum-practical manuals on Computer Hardware, Repair and Maintenance (LINUX) and Basic Rural Marketing and Marketing Legislations. The institute also developed on-line training package on selected topics of Information and Communication Technology of GFC. Curriculum for +2 level vocational course for Health Insurance Assistants, Hospital Administration Assistants and Entertainment Industry was developed.

Training and Extension

A training-cum-workshop was organised to train officials of Jammu & Kashmir on
Vocational Education and Training in which 30 officials participated. Training programmes were also organised in the areas of Educational Technology for vocational teachers of Karnataka; Skill Training and Skill Certification for vocational teachers of Sikkim; Accounting and Auditing for vocational teachers of the Southern region; Computer for vocational commerce teachers; Marketing and Salesmanship and Bakery and Confectionary for vocational teachers of Maharashtra; Farm Machinery for vocational teachers of Karnataka, Kerala,
Bihar and Jharkhand and Computer Technique (LINUX) for vocational teachers of Goa and Entrepreneurship Development for vocational teachers of Haryana.

The Institute organised 18 orientation programmes for key functionaries, principals and teachers, NGOs and other stakeholders in the field of Vocational Education for the states of Andhra Pradesh, Karnataka, Kerala, Maharashtra, Meghalaya, Punjab and Tripura. While the orientation programmes were mainly to sensitise and update them with the developments in the field of Vocational Education, some specific subjects like placement of vocational students for apprenticeship training, management of vocational schools were also covered in certain programmes. About 500 officials were oriented in these programmes. One programme was organised for capacity building of Minority Community Institutions in the area of Vocational Education in which 32 officials participated. One sensitisation programme was organised for NGOs, Jan Shikshan Sansthans and other stakeholders of Vocational Education in Maharashtra orienting 37 participants.

Eight orientation programmes were organised by the Institute exclusively for Scheduled Castes and Scheduled Tribes in different regions of the country including the North Eastern Region.

**NCERT Awards for Best Practices in Vocational Education** : Every year, the Institute organises this programme to give NCERT Awards for Best Practices in Vocational Education state-wise, with an objective of enhancing the morale of the dedicated persons and to set examples for emulation by others to contribute towards qualitative growth of the vocational education programme in the country. Ninety-two nominations were received from 21 states out of which 61 awardees from 18 states received awards in person on 5th July 2005. The NCERT awards were given state-wise in five categories: Best Achiever Award; Second Best Achiever Award; Best Vocational Teacher Award; Best Institution Award; and Best School-Industry Linkage Award. The recipients were vocational students, vocational teachers, principals of vocational institutions, and representatives from collaborating industries etc. The awardees were given mementos and certificates. Students and teachers were given cash prizes also. Educationists, administrators and vocational teachers, besides award recipients attended the award giving function.

**Quarterly Bulletin** : The Institute publishes a quarterly bulletin which carries information about activities undertaken by PSSCIVE, Bhopal, along with articles and write-ups on vocational education. Copies of the bulletin are sent to the State level key functionaries and vocational schools. Two issues of the bulletin were published.

**Extension Lecture Series** : PSSCIVE, Bhopal arranged an extension lecture of Prof. Yogesh Atal on “Education and Development : Challenges for 21st Century.”

**International Relations** : PSSCIVE, Bhopal is a Centre of UNESCO’s International Project on Technical and Vocational Education (UNEVOC) in India. It maintains continuous contact with the development in the field of Vocational and Technical Education around the globe. Continuous interaction has been made with the UNESCO’s International Centre for Technical and Vocational Education Training, Bonn, Germany and exchanged materials with other UNEVOC Centres through e-mail.

**Major Contributions of the Faculty**

**Prof. M. S. Khaparde, Joint Director** (additional charge upto 07-09-2005) provided necessary inputs in the
implementation of the programmes and overall supervision of the activities of the institute. During this period a major programme of Awards for Best Practices in Vocational Education was organised.

**Prof. M. Sen Gupta, Joint Director** *(additional charge from 09-09-2005 to 22-03-2006)* attended a meeting in British Council with high level UK delegation to develop a proposal for sustainable Indo-UK Partnership in Vocational Education.

**Prof. R.G. Chouksey, Joint Director** *(from 23.3.06)* developed documents on "Status of Vocational Education and Training in India" and "Strategies for Effective implementation of Vocational Education and Training in India" for the Ministry of Human Resource Development. He wrote two chapters in Curriculum Framework on Open Vocational Education and Training namely "Concerns and Approaches of Vocational Education and Training" and "Scenario of Vocational Education and Training in India" and these are being published by the National Institute of Open Schooling, New Delhi.

**Prof. P.V.P. Prakasa Rao** conducted a follow-up study of vocational pass-out students of paramedical vocational courses and cost-effective study of paramedical vocational courses. He developed a curriculum for health insurance assistants. He also acted as resource person in an orientation programme organised for paramedical junior college officials. He presented a paper on "Strategies for Enhancement of VET system of Kerala" at PSSCIVE, Bhopal.

**Prof. S.K. Goel** conducted a Orientation Programme on Vocational Education for key functionaries working in the field of ETR of PWDs. He also conducted another programme on "Compendium of Scientific and Technological Developments for Vocational Rehabilitation of Persons with
Disabilities". He participated in the workshops and consultation meetings organised by NCTE, RCI, MPBOU, AIRA, MHRD. He has been on the editorial board of Quarterly Bulletin of Vocational Education; An Interdisciplinary Research Journal: Disabilities and Impairments; Psycho-lingua; Indian Journal of Psychometry and Education and also a member on the Research Board of Advisors of ABI (USA).

Prof. Mridula contributed to the consultation meeting on Work and Education, developed one pre-vocational module and two instructional materials for + 2 vocational courses. She worked as a resource person in a workshop to orient and train officials of Jammu & Kashmir on Work Experience; and a Training of Vocational Education Teachers in Sikkim on "Skill Training and Skill Certification". She also contributed in an Orientation Programme on Vocational Education for principals of private Paramedical Vocational Junior Colleges in Andhra Pradesh. She has been on the Editorial Board of the 'Indian Journal of Vocational Education' of PSSCIVE, Bhopal.

Shri Sachchidananda Ray, Reader developed a compendium of occupation based modules in "Electrical Engineering" and a competency-based modular curriculum on "Auto Electrician" for the state of Karnataka. He conducted workshops to orient and train officials of Jammu and Kashmir on Work and Education; Vocational Education Teachers of Sikkim on Skill Training and Skill Certification: Principals, Senior Teachers and Key Functionaries of Meghalaya on Vocational Education strategies. He participated in a National Seminar on approaches to Entrepreneurship Education, and a consultation meeting on Work Education and formulation of POA for WE. He participated as a resource person in various programmes conducted by the Institute.

Shri A. Palanivel, Reader developed modules on office related vocational courses at the entry level. He organised a
capacity building programme for the key officials of Tripura state; and training for the teachers of Goa state on evaluation techniques. He participated in working group meetings and contributed for development of instructional material on Elements of International Marketing; and Introduction to Marketing. He worked as resource person in a sensitisation programme of officers of SC/ST corporations/directorates of Eastern and North Eastern regions held at Shillong on vocational education and in the training programme for Scheduled Tribes from tribal districts of Madhya Pradesh.

Shri Saurabh Prakash, Reader conducted a research study on the Pedagogy used by Ustads (Master Craftsmen). Two sets of proformas were developed to study the pedagogical aspects. A survey was conducted in Bhopal and Indore districts to study the pedagogical aspects followed by Master Craftsmen. He organised a training of teachers in Farm Machinery Area to help them in learning of vocational skills and knowledge.

Dr. R.K. Shukla, Reader coordinated a programme on "Development of National Vocational Qualifications in Insurance based vocations". He conducted two short-term vocational Teachers Training Programmes : one in the area of Accountancy and Auditing and the other on computers for Commerce teachers. He coordinated a programme on "Sensitisation of NGOs and other stakeholders of vocational education in Maharashtra" and "orientation programme for the teachers of Commerce-based vocational course" from the state of Kerala. He contributed as a resource person in the development of Practical Manuals of Basic Rural Marketing; and Marketing legislations for the vocational course of Rural Marketing and Short-term Vocational Teachers' Training Programme in the area of marketing and salesmanship. He also worked as a resource person in the Orientation programme on Management of Vocational Schools for the Principals of Junior Colleges in Andhra Pradesh; sensitization of Scheduled Caste key functionaries of Western region on vocational education; sensitisation of key functionaries and other stakeholders of Tripura on vocational education; sensitisation of Scheduled Caste key functionaries of Eastern regions on vocational education. He published a paper titled "Strategies for Development Human in Change Business Environment" in Psycholingua.

Dr. Suniti Sanwal, Reader conducted a research study of Early Childhood Workforce and Early Childhood Environment in Indore and Bhopal cities. She organised a programme on "Capacity Building of Minority Community Institutions for Vocational Education". She contributed as a subject expert in finalisation of Diploma course in Early Childhood Care and Education, assisted in development of status paper on Vocational Education and Training (VET) in India, and in the finalisation of tools of Project DISHA - on school readiness and preschool education. She published papers on "Engaging Children in Real Work in Pre-schools" in 'The Primary Teacher' — published by NCERT; and "A study of Mandal Vocational Education Centers of Andhra Pradesh — India" in the IJVE, PSSCIVE. She has been the Executive Editor of Indian Journal of Vocational Education of PSSCIVE, Bhopal. She participated in the meetings of the National Focus Group on Work and Education.

Dr. Asfa M. Yasin, Reader contributed in the development of a Modular Curricula and instructional material for Modular Courses for Fisheries and guidelines for implementation of the Modular Package. She participated in the development of Class IX book of NCERT as a member of the author team; workshop on Vision of NCERT; workshop
for development of a Framework for open vocational education organised by the National Institute of Open Schooling (NIOS). She was involved in preparation of Programme of Action on Work and Education of National Focus Group, presented a paper at the National Consultation on Career Psychology organised by the Promise Foundation, Bangalore. She contributed a paper in the Indian Journal of Vocational Education, PSSCIVE, Bhopal.

**Dr. R.K. Pathak, Reader** coordinated Sensitisation programme for the officers from SC/ST Corporations on Vocational Education; and Orientation Programme on the Management of Vocational Schools for the Principals of Junior Colleges in Andhra Pradesh. He contributed in the development of a Modular Package for certificate programme (level 1 qualification) in Horticulture; and in Plant Protection. He worked as resource person in a Training Programme for scheduled tribes from selected tribal districts of Madhya Pradesh; and Sensitisation of SC key functionaries of southern region on vocational education. He also published an Instructional - cum- practical manual on setting up floral shop.

**Dr. V.K. Jain, Sr. Lecturer** conducted a study of Lok Seva Kendra Scheme of Maharashtra with special reference to Vocational Skills and Self-employment. He coordinated the development of a Teacher’s Guide for Promotion of Entrepreneurship Education and Self-employment in Vocational Education. He developed a Competency-based Modular Curriculum on Videography. He organised a Training for Vocational Teachers of Haryana in Entrepreneurship Development. He participated as resource person in an Orientation Programme for personnel from Minority Community Institutes; Orientation Programme for key functionaries of PWDs institutions; Sensitisation Programme for key functionaries of North-East SC/ST Institutions; Training Programme on Vocational Education and Training for scheduled tribes from selected tribal districts of Madhya Pradesh. He also attended the meetings of the National Focus Group on Work and Education. He participated in National Consultation meeting on Career Psychology organised by the Promise Foundation, Bangalore and presented a paper titled "Career Development through Vocational and Technical Education : Opportunities and Challenges."

**Dr. Pinki Khanna, Sr. Lecturer** developed an Instructional Module on Sprouted Foods and Designing and Making of Lac Bangles. She developed Camera Ready Copies (CRCs) of materials on Advanced Weaving, Dyeing and Printing (Practical Manual, Class XII); Textile Craft (Practical Manual, Class XI) and Basic Design to Textile Designing (Practical Manual, Class XI). She organised a Training Programme for Vocational Teachers of Maharashtra in the area of Bakery and Confectionery. She contributed as a resource person in development of syllabus for Higher Secondary Level in the area of Home Science; and in the development of Instructional Module on Decorative Glass Items. She also contributed in Development of Vocational Education and Training Programme for selected Tribal districts of Madhya Pradesh.

**Dr. V.S. Mehrotra, Sr. Lecturer** developed a modular curricula and instructional materials for Horticulture and Plant Protection vocational courses. He was also involved in training of vocational teachers on development of classroom based action research project in vocational education and training. He presented a paper entitled "Integrating Vocational Education and Training with Open and Distance Learning : Taking Skills Training to Doorstep" at the International Conference on Open and
Distance Education in Global Environment: Opportunities for Collaboration organised by Indira Gandhi National Open University (IGNOU) and International Council for Open and Distance Education (ICDE) at IGNOU, New Delhi.

**Dr. R. Muthuraj, Lecturer** coordinated a programme on Identification of Vocational Teachers Entrepreneurial Competencies in the States of Maharashtra and Tamil Nadu. He organised two training programmes for the key functionaries of Maharashtra and Punjab on placement of vocational students for Apprenticeship Training and Sensitisation of SC/ST Vocational key functionaries Southern Region on vocational education. He has been the Principal Investigator in “A Snap Study for the Need Assessment of Manpower for implementation of Vocational Education Programme in Himachal Pradesh” and has been the Co-author of a paper titled “Investors Time Perspective Characteristics” published in Journal of Indian Institute of Economics Federation House, Hyderabad. He developed curricula on Technician (Vocational) Apprenticeship Training Procedure for Accounting and Finance Competency-based Vocational Courses, a Modular curricula on E-Commerce and E-Accounting.

**Dr. A. Nayak, Lecturer** coordinated development of curriculum on Hospital Administration and an Orientation Programme for Principals of private exclusive Paramedical Colleges of Andhra Pradesh. He contributed as resource person in Short Term Teachers Training Programme in the area of Educational Technology for Karnataka Teachers, in Sensitisation of key functionaries of (SC/ST) Corporations on vocational education in Southern region. He published papers on “Isolation of Lipopolysaccharide from strain GSI8h/ATCC 55963, a soil isolate of Indian copper mine” in Microbiology Letter, Federation of Europian Microbiology society.

**Shri Deepak Shudhalwar, Lecturer** developed two instructional modules one on Computer Hardware Repair and Maintenance and the other on Linux in the area of Computer Science. He also developed instructional material on Information and Communication Technology for General Foundation Course of the Vocational Education on a CD in the form of web pages with online testing mechanism. He organised a training programme on Linux for the vocational teachers of Goa state. He organised a workshop on evaluation technique for oral and practical evaluation for the Commerce and Home Science based vocational courses. He prepared the calendar of activities of PAC approved programmes and placed it at the Institute’s web site.

**Dr. P. Veeraiah, Lecturer** organised one Teachers Training Programme and one Sensitisation Programme. He acted as a resource person in three Orientation/Sensitisation Programmes. He participated in a working group meeting for Development of National Vocational Qualifications in Insurance based vocations (Level-1). He conducted three Working Group Meetings for Development of Instructional Material (Theory as well as Practical Manuals). He worked as coordinator for development of a textbook on “Marketing Legislations”. He published an article in the Journal of Insurance Times, Kolkata. He has written a chapter in a Orientation Guide for Promotion of Vocational Education and Training among Persons with Disabilities.