

## RESEARCH BASED VOCATIONAL EDUCATION PROGRAMMES THROUGH OPEN AND DISTANCE LEARNING MODE WITH SPECIFIC REFERENCE TO OPEN SCHOOLING

Savita Kaushal\*

### ABSTRACT

*The policies, expectations and avenues for strengthening of Vocational Education Programme (VEP) in India through Open and Distance modes hardly need an emphasis as a national priority in the education sector. The Vocational Education is to be an indispensable part of the total education system in the country. The need for providing skill development to out of school population has also been accepted and stressed upon through various policy statements in order to provide an opportunity to prioritized groups such as drop outs, girls and women, SC,ST, OBC communities, slum dwellers, rural youth, urban poor etc. This is much more so for those who do not want to undergo any academic programmes after class X and also for the unemployed youth in general. All these expectations can be fulfilled if non-formal Vocational Education and Training (short-terms, long-term and continuing) programmes with entrepreneurial and self employment skills are provided, keeping in view the current needs of the community. Such skills are to be rightly oriented to facilitate quick employment (self or wage). There is, therefore, a dire need to provide an added impetus to the programme of "Vocationalisation of Education" at all levels by (i) Redesigning of Vocational Education; and (ii) Forging Linkages between the "World of School" and "world of Work". For this purpose the programme is to be understood within a national framework if serious attempt at Vocationalisation of Education, in its operational term, is aimed at. In this paper an attempt has been made to provide a list of parameters which may be helpful for preparation of vocational education programmes and their transaction through open and distance learning mode.*

**Key Words:** Vocational Education, Open Schooling, Open and Distance Learning

### Introduction

It is rightly said, "Education, beyond all other devices of human origin, is the great equalizer of the conditions of men - the balance-wheel of the social machinery". The underlying assumption reflected in this statement is that the education should equip an individual with basic skills and functional competencies which would enable him/her to participate effectively in the mainstream economy as well as in realizing the benefits accruing from social and other; developmental sectors. In order to realize these goals the need for meaningful linkages between the world of work and the world of education has been well recognized in our educational policy documents.

In 1990's the Jomtien Conference (Education for All) emphasized that every person shall be able to *benefit from educational opportunities* designed to meet his/her basic learning needs. It would enable human beings *to survive, to develop their full capacities, to live and work with dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning.*

In a similar vein the Delor's Report (1996) mentioned that the secondary education is at the *crossroads of life*. This stage of education is often regarded as a gateway to social and economic

---

\* Assistant Professor at Department of Training and Capacity Building in Education , National University of Educational Planning and Administration (NUEPA), New Delhi, E mail: savita@nuepa.org

advancement but it is perceived as inegalitarian and not sufficiently open to the outside world. While secondary education prepares adolescents for higher education, it generally fails to prepare them for the world of work.

### **Vocational Education: Initiatives in India**

Vocational Education, in one form or the other, has existed in almost all sections of the society and cultures. Industrialization and urbanization brought about almost major changes in the situation. Traditional jobs were substituted by others that used different tools and technology. VE has been defined as a comprehensive term embracing those aspects of the educational process, in addition to general education, which deals with the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding of knowledge relating to occupations in the various sectors of economic and social life.

Vocational Education is designed mainly to lead the learners to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation or trade or class of occupations or trades. Successful completion of such programmes can lead to, but not necessarily to a labour-market, relevant vocational qualification recognized by the competent authorities in the country like Ministry of Labour and Employment Education.

In India, Mahatma Gandhi in late 1930 visualized basic education (Buniyadi Shiksha) as a basic tool for the development of National consciousness and reconstruction of the society. His concept of education throughout life, work and environment was a new contribution to the philosophy of education, which has now been accepted universally.

The secondary Education Commission (Mudaliar Commission, 1952-'53) put forward the idea of multi-purpose school and recommended an 11-year pattern of school education for offering diversification after 8 year of schooling by providing training in various crafts/ vocations. The Commission felt that at the end of this, a student should be in position to take up some vocation and enter the world of work. The Kothari commission (1964-'66) suggested the restructuring of education into a uniform pattern of 10+2+3 education all over the country, implying 10 years of undifferentiated education for all, with diversification into academic and vocational stream at the +2 level.

The NCERT document entitled "Higher Secondary Education and its Vocationalisation" (1976) emphasized that internal restructuring and modification of contents in education is required for establishment of strong linkages between education and other concerned sectors involved in developmental process.

In 1978, the National Review Committee on Higher Secondary Education with special reference to Vocationalisation also approved the two streams under the name of "General Education Spectrum" and Vocationalised Spectrum" and made Socially Useful Productive Work (SUPW) a compulsory component.

The report titled "Learning to Learn" was also brought out by NCERT on the basis of a National Seminar on Vocationalisation of Education which emphasised the need for training facilities, Vocational surveys, Vocational Teachers, Curriculum Designing and Instructional Materials, Linkages, Apprenticeship and vertical mobility.

In 1984 a Seminar on "Vocationalisation of Education – Profile and directions" was conducted by NCERT which provided guidelines for the organisational structure and strategies for effective

implementation of the Vocational Programme at different levels. The report of the National Working Group on “Vocationalisation of Education” constituted by the Chairman. All India Council for Technical Education (AICTE) in 1985 recommended classification of Vocational areas such as Agriculture, Business and Commerce, Engineering and Technology, Health and Para-Medical Services, Home Science, etc., and also devised the structure of Vocational Courses under different systems. The pattern of management system at National Regional, State, District and Institutional levels was also suggested. The interlinking and articulation of Vocationalisation Programme and their organisational structure were also proposed by the Working Group. The NCERT also held another National Seminar on Vocationalisation in November, 1985 which aimed at suggesting the implementation of Vocational Education Programme at middle/Lower secondary stages, Higher Secondary Stages and Tertiary stages. It also endorsed the recommendations of the earlier working group and emphasised the role of management and financial resources.

The National Working Group on Vocationalisation of education (Kulandaiswamy Committee, 1985) reviewed the Vocational Education Programme in the country and developed guidelines for the expansion of the programme. Its recommendations led to the development of the Centrally Sponsored Scheme (CSS) on Vocationalisation of Secondary education. The Committee also suggested that Socially Useful Productive Work (SUPW) may assume the form of training in “life skills” and should, therefore, be given pre-vocational orientation.

VEP was started in 1976-77 under the programme of Vocationalisation of Higher Secondary Education in general education institutions. A variety of vocational courses of two years duration in the area of Agriculture, Business and Commerce, Engineering and Technology, Home Science, Health and Paramedical and Humanities were offered by schools. The programme aimed to provide skills through production and service oriented courses to reduce the mismatch between the skills acquired by pupil with those required by the employee/ market, thereby reducing the aimless pursuit to higher education. The programme also helped in developing entrepreneurial spirit, motivation and competencies needed to organize and run an entrepreneurial venture.

The National Policy on Education (1986) as well as Revised Policy formulation (1992) too accorded high priority to the programme of Vocationalisation of Education. The National Policy stated, “The introduction of systematic, well planned and rigorously implemented programme of vocational education is crucial in the proposed educational re-organization”. It further stated that the government will take special steps to cater to needs of women, rural and tribal students and deprived sections of society including handicapped. Non-formal, flexible and need based vocational programmes will be offered for neo-literates, youths who have completed primary education, school dropouts, persons engaged in work, and unemployed and partially employed persons. It also stated that the opportunities, under pre-determined conditions, for professional growth, career improvement and lateral entry into the courses of general, technical and professional education through appropriate bridge courses will be provided to vocational passouts.

The Programme of Action (POA) on National Policy on Education (NPE-1986) provided directions for implementation of the Vocational Programme providing policy directives for strategic action on the following areas and issues: -

- Status and Present position
- Management of Vocational Education

- Vocational Education Programme
- Secondary stage Vocationalisation
- Higher Secondary stage Vocationalisation
- Vocational Education Vs Vocational Training Programems
- Vocational Education at tertiary level
- Apprentership Training
- Other Vocational Programmes/areas of need Vocational Education for special Categories
- Vocational Education for special Categories
- Formulation of various programmes for implementation
- Pre-requisites Priorities and Guiding Principles
- Development of Vocational System
- Developing resources and facilities
- Developing linkages
- Programmes for special groups and out of schools population Non-formal programmes of Vocational Education Setting up of special Institutions
- Fixation of targets up to Eighth Plan period
- Vocational Teacher Training
- Facilitating employment avenues

The Report of the Rama Murty Committee, set-up for review of National Policy on Education, 1986 by Govt. says that “Education is a preparation and discipline for life; a liberating force, integrated with life and work, it will make Right to Work a reality”. The right to work can be a meaningful reality only if the people are ‘empowered for work’ by imparting worthwhile insights and skills and are given the competencies which would make them self-dependent and self-generative members of the Society. The recommendations of the Committee on Education and Right to Work are, therefore, summarised as under :

- Revamping of scheme of Vocationalisation of Education.
- Marking Work Experience/Socially Useful Productive work as integral part of the School Education
- An integrated design of Vocational Education at higher Secondary Stage of school education.
- Bringing structural changes in Secondary education.
- Organisation of Vocational Programmes through non-formal i.e. Open Education system using existing schemes and Institutions.
- Removal of inherent anomalies in Vocational Courses.
- Provision of work Benches and Practice Schools
- Redesigning Vocational teacher education Courses.
- Decentralisation of planning and management.
- Strengthening of Technical and Management Education.

Working Group on Open Learning System (OLS) at school stage recommended strengthening of VEP for development and implementation of vocational and technical courses, setting up community workshops for Rural Vocational Education and Training, related activities etc especially during the Ninth Five Year plan both at the national and state levels. In the tenth five year plan, vocational education and training was identified as important thrust area. Additional allocation of RS 650 crores was done for the vocational education mission in the Tenth plan Five Year plan (2002-07). It further stated that the vocational courses

in school should be competency based and in modular form with a credit transfer system and provisions for multi-point entry/exit.

The eleventh plan five year plan ( 2007-12) stated that the emphasis will be on demand-driven VE programmes in partnership with employers. The vocational education could be offered in flexible mode through modular courses of varying durations, with credit transfer facility. A National Vocational Qualification (NVQ) system, in which public and private systems of VE collaboratively meet the needs of industry and individuals, will be developed. Under this, modular competency based vocational courses will be offered along with a mechanism of testing skills. Bridge courses to facilitate people without any formal education to get enrolled in the regular system of courses will also be developed through NVQ system.

In the Twelfth Plan ( 2012-17), it was stressed that a mechanism would be created for convergence of vocational courses offered by various ministries, private initiatives and vocational education institutions, and use schools as the outlet for vocational education of young people. A comprehensive repertoire of vocational courses, duration of each course, equipment and facilities, costs and agencies will be developed.

The National Curriculum Framework-2005 also emphasized on institutionalization of work centre education as an integral part of the school curriculum from preprimary to plus two stage, laid the necessary foundation for re-conceptualizing and re-structuring vocational education to meet the challenges of globalized economy. It envisaged to establish VET centres and institutions from the level of village clusters to larger cities through optimizing the usage of existing infrastructure facilities and entering into fresh collaborations, in addition to expand the existing facilities at ITI's, Polytechnics, KVK's and other technical institutions. The new paradigm shift in the approach offered flexibility through adopting modular curricular approach with a provision of multi-point entry and credit points with an inbuilt credit accumulation policy. The new approach conceived the concept of creating Work Benches or Work Places or work spots in the neighborhood or regional rural crafts, agricultural or forest based production systems and industries and services, thereby utilizing optimally the human and material resources, along with building a credible system of evaluation, equivalence, institutional accreditation and apprenticeship while ensuring carefully that the standardization did not become a negative tool for rejecting/disqualifying the diverse knowledge and skills, that characterizes different regions of India. The new framework suggested developing the VET centers as skill and hobby centres for school children and for negotiating a collaboration arrangement for work centred curriculum even during the school hours.

The national skill development policy (2009) outlined an ambitious plan to skill about 12-15 million youth each year. The policy amongst other things proposed to establish a National Vocational Education Qualification Framework. The framework proposes the following features:

- Competency based qualifications and certification on the basis of Nationality agreed standards and criteria.
- Certification for learning achievement and qualification.
- A range of national qualification levels -based on criteria with respect to responsibility, complexity of activities and transferability of competences.
- The avoidance of duplication and overlapping of qualification while assuring the inclusion of all training needs.
- Open and flexible system which will permit competent individuals to accumulate their knowledge and skill through testing & certification into a higher diploma and degree.

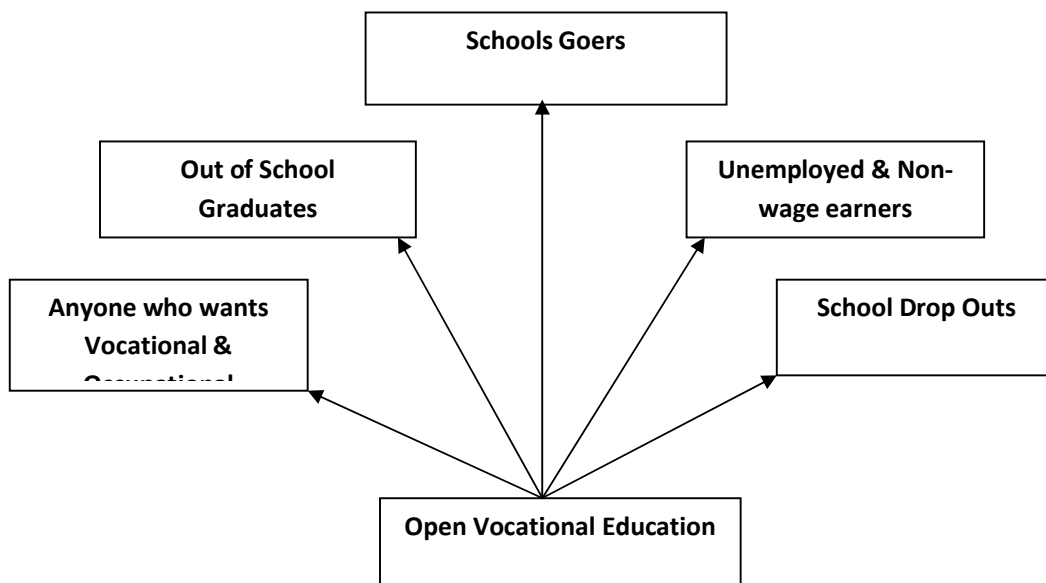
- Nationality agreed framework of affiliation and accreditation of institutions.
- Multiple certification agencies/institutions will be encouraged within NVQF.

Recently Skill India campaign has been launched by Prime Minister Narendra Modi on 15 July 2015 with an aim to train over 40 crore people in India in different skills by 2022. It includes various initiatives of the government like "National Skill Development Mission", "National Policy for Skill Development and Entrepreneurship, 2015", "Pradhan Mantri Kaushal Vikas Yojana (PMKVY)" and the "Skill Loan scheme".

In India, the present formal education system does not offer sufficient scope for such mental orientation. It is well known fact that millions of children in India are forced to enter the labour market instead of pursuing education in the schools. Even among those who begin attending the school, a large number as indicated by high dropout rates and low transition rates, enter the workforce at a very early stage of life. In view of this the academic nature of the school curriculum has come under criticism.

The OVE Programme should be available for all those who want to take any of the course(s), offered by the system. There is a possibility that with the research inputs in due course of time, new groups of learners for the Open Vocational Stream may also emerge namely:

- School drop-outs and youth in petty or self-employment, e.g. farms, repair shops cottage industry, services, etc.
- Unemployed youth and non-wage earners
- Young Students (School goers, mainly of 9-12 th standards) and Collegiates at graduate and post-graduate level.
- Out of school graduates or any one else whether educated unemployed and /or educated employed.
- People with pre-vocational background/work experience



The policies, expectations and avenues for strengthening of Vocational Education Programme (VEP) in India especially through Open and Distance modes hardly need an emphasis as a national priority in the education sector. This is much more so for those who do not want to continue their studies after class X and also for the unemployed youth in general. All these expectations can be fulfilled if non-formal Vocational Education and Training (short-term, long-term and continuing) programmes with entrepreneurial and self-employment skills are provided, keeping in view the needs of the community.

In this context it is worthwhile to mention that the National Institute of Open Schooling (NIOS) offers vocational courses through open and distance learning mode at school level in India. It imparts education to the children by means of almost all traditional and modern modes of instruction. Its expansion and development is impressive in terms of its contribution in meeting the growing demand for vocational education in the country. Since its inception the open schooling system in India encompassed vocational subjects in its scheme of studies. Vocational subjects like Typewriting (English/Hindi), Business Studies, Home Science, etc were available for offer by the students at secondary level from 1981-82. Similarly, in 1988-89 the vocational courses like stenography, Typewriting (English/Hindi), Secretarial Practice, etc were included in the General stream at Senior Secondary Level. Based on encouraging response of the students offering the vocational subjects with academic courses and the up-gradation of 'Open School' to 'National Open School (NOS) in 1989, explorations were made in 1990 to provide practical vocational courses, both for the urban and rural population. In addition, NOS decided to make a beginning by providing community and general education vocational and life enrichment pattern. Two projects were given to an outside agency for developing courses for NOS within the parameters of open learning system. These courses were and "Janswasthya" (Community Health Education) as and "Paripurna Mahila" (Empowered Status of Women)". Both these package used distance education as the basic medium, with supplementary face-to-face interaction.

In order that the vocational education through open schooling is successful and strengthened it is important to ensure quality and relevance of vocational courses to social and economic life of an individual as well as that of the society at large. This is possible only through research inputs.

### **Interventions Required**

Programme review is an important activity and main step in maintaining quality in a programme. The inputs received and observations made from learners, employees, parents etc. are critical for further improvements. There is a need to integrate decision making processes with programme review.

Chaffe Stengal(1992) notes the 'desirability of combining programme reviews with students' outcomes, assessment to enhance programme and instructional improvement'. In this context some research has already been conducted. A study entitled "Skills for Development: A Study of Vocational Programme in Livestock and Poultry through Distance Mode" was conducted by Rahman et al on vocational skills attained by learners in Certificate in Livestock and Poultry (CLP) programme conducted by Bangladesh Open University. A number of dropouts, successful students (including self-employed) and their employers were also interviewed. The potential clientele of this programme, therefore, included significant number of students from rural areas, particularly youth the distressed women who must continue to work to support their families. However, participation of female students was very low in comparison to the males. From the results of the study it was concluded that the programme was effective and

appropriate in terms of skill development for self-employment and poverty alleviation of the target group. It is also found that a significant number of students dropped out from the programme for a variety of reasons. Therefore, measures should be taken to improve and develop a sustainable ODL delivery mechanism so that student becomes attracted to the programme. Additionally, liaison with government and/or other NGOs should be maintained so that proper arrangements for student loans and entrepreneurship development can be made. The researchers emphasized greater importance of interaction with learners to improve the success rate. These findings are indicative of the generic situation in the less developed societies.

The study by Koul(2005 ) based on the role of counseling in distance learning for B.Sc (Nursing) offered by IGNOU revealed that workshops of longer duration in the face-to face situation would further enhance learners' performance. The findings emphasized on use of different formats such as small group discussions, individual guidance, role play, simulation and brain storming etc. to arouse and sustain the interest of the learners during the counseling, ensure varied teaching learning and clinical experience to learners and focus on patient care activities. However there is a need to conduct more research on learning styles and attitudes of learners towards self study, counseling and practical activities which would throw light on outcome of distance learning system in professional and skill based programmes.

Programme review should relate to the decision making processes of the institution such as planning and budgeting. Thus there is an ardent need for the building of research capacity, and researching into the various aspects that have impact on vocational education programmes that are offered through open and distance education. Vocational courses that are developed and designed on the basis of research are likely to be more relevant, realistic and appropriate to the needs of society and respective industry/institution/organization. This calls for analysis of some key factors on which researches may be conducted to make vocational courses through open and distance learning more successful.

#### **Discerning the Customer Needs and Availability of Clientele**

Market research is crucial not only in the planning phase of the programme but also during its implementation. It has been rightly stated by Derek Rowntree " Open Learning's Open door can easily become a revolving door that deposits them back to the pavement". The courses have to be responsive to the target groups' changing needs. This is a challenge because some courses may have limited demand but are crucial for the progress of the respective society. Getting to know the target audience thoroughly through market research; its social and demographic makeup (economic status, education, age structure, and so on), its psychological features (attitudes, motivations, values, behavioural patterns) and its receptivity to the vocational education programme are to be thoroughly studied.

The arena of knowledge is expanding very fast on account of the rapid developments taking place across the world. The vocational education programmes should be compatible to the changing requirements of the current times. Adaptability and innovation is indispensable for success of vocational education courses. *In addition to* this specialized courses that update existing knowledge are to be identified from time to time.

In the light of the significance of skill in pedagogy, it is essential to develop links between vocational education courses offered by higher education institutions and those offered by the open schooling.



Much of the learning theories are child-oriented, often based on development theories that take into consideration the young children and as a result the best ways of educating the adults are yet to be explored. Research strategy adopted may involve intensive networking with potential government, non-government and private organizations. This may provide rich data and direction towards meeting the challenges of reaching the unreached through alternative educational designs.

#### **Strategies of Motivating the Learner**

The ODL institutions need to set strategies for scanning the general population and determining the way of motivating learners choose appropriate courses and also learn through open and distance learning.

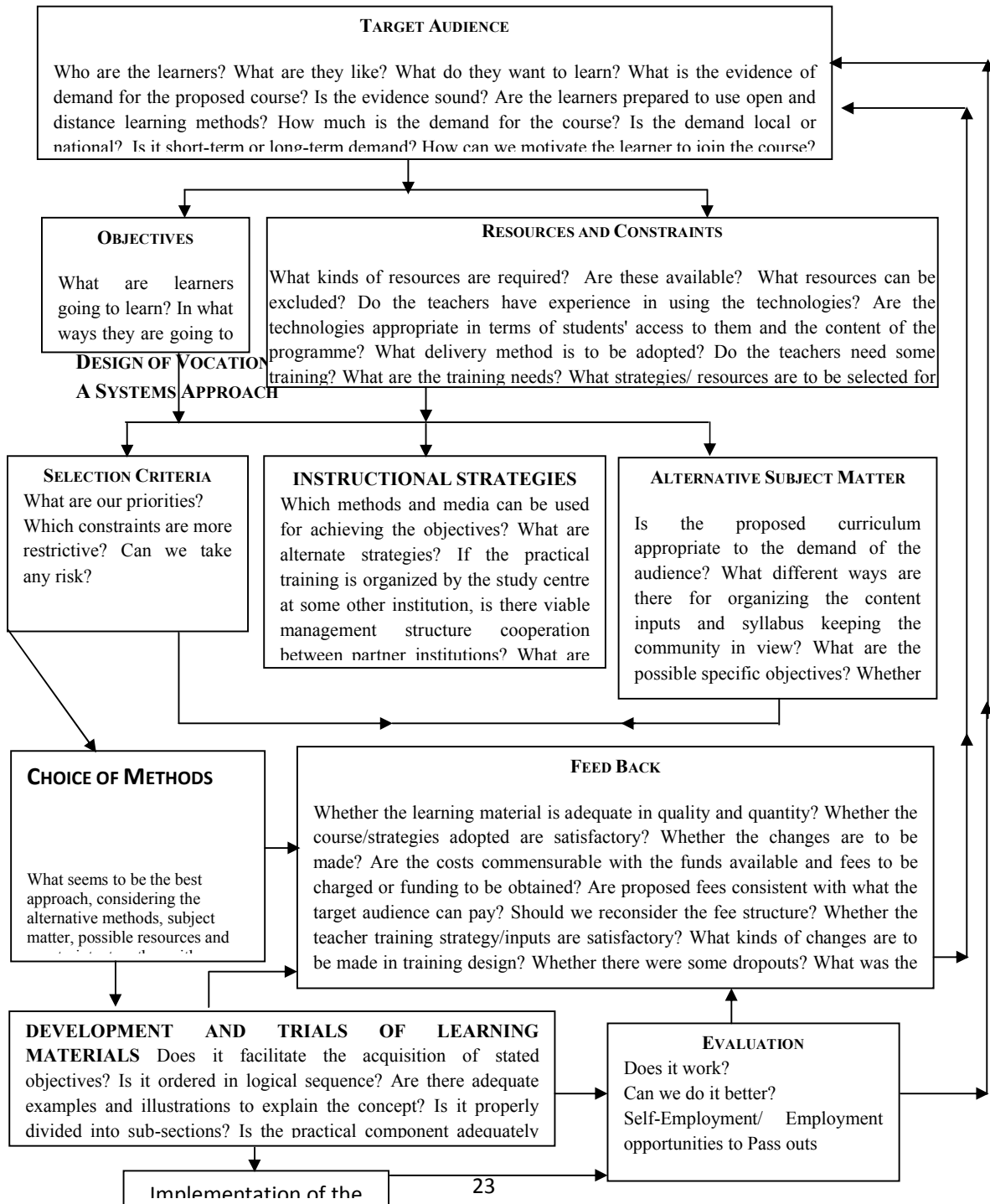
**Development of skill standards:** Skill standards describe the performance expectations for a worker in a particular vocational area. The skill standards that are applicable to a course are to be identified. Development of skill/competency standards at national level is a major challenge to give credibility to vocational education programme. Identification of the potential areas/ situations for vocational courses that could develop appropriate work-based values among the learners is also to be researched upon and included in the curriculum.

#### **Taking the Community into Consideration**

For any distance learning vocational education programme to be successful it must of necessity, take cognizance of the cultures and customs of a people because anything less than that simply represent a theory that is divorced from the practical realities on the ground and will not be effective in improving and developing anybody's well being. Strategies to assess socio-economic demands and balance them with the standard of skills and knowledge have to be identified. In other words, ODL institutions need to constantly strive to provide an excellent education system that caters to the requirements and aspiration of all educational stakeholders in the dynamic context. Development of courses to cater for the needs of distance learners and the society requires ODL institutions to balance market demands with social accountability. Hence there is need to build acceptance and confidence of the public in ODL programmes and their recipients.

Thus in order to give community orientation to vocational courses the following factors may be researched about thoroughly-

- Adaptability of the courses, instructional strategies, to the local conditions and circumstances;
- Strategies that can be adopted for increasing awareness of the community regarding the programmes;
- Strategies of establishing a continued relationship with the learners;
- Meeting the needs of the different kinds of community members

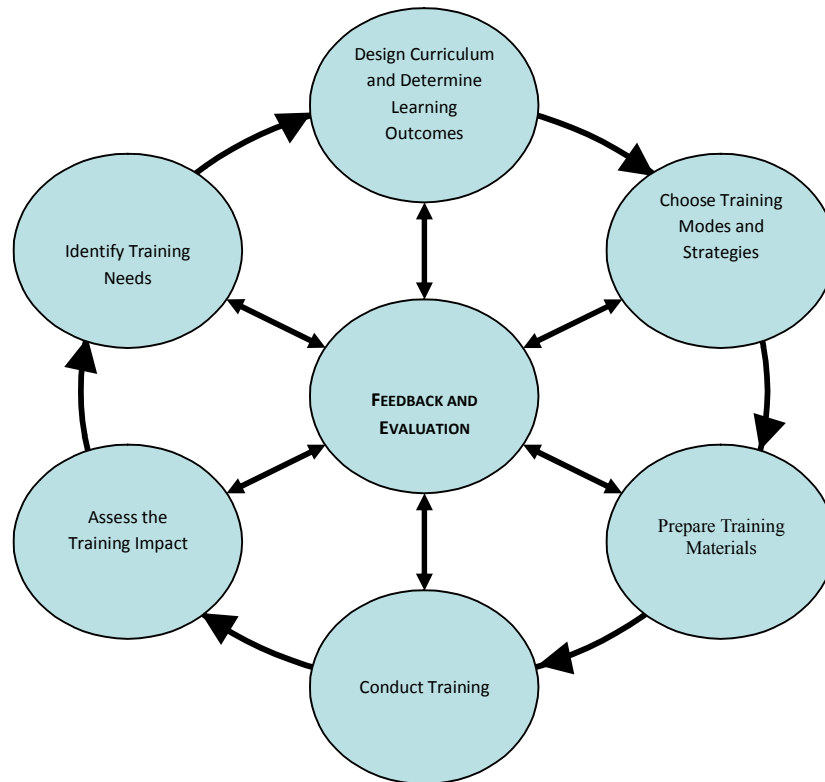


### Instructors and Instructional Processes

Instructional processes including course development, course production and course delivery particularly in area of vocational education present challenges to ODL. In this regard identification and availability of qualified, knowledgeable and committed instructors is a crucial task of transaction of courses through ODL institutions.

Special attention is to be paid for upgrading skills of teachers from time to time, so that they can fully play their roles effectively in the view of the changing scenario. The evaluation component has to be built into the training design. Every stage of the training process has to be evaluated. It should begin with training need assessment and end at impact assessment. When the evaluation process has been built into the training design, and provisions are made for collecting feedback, evaluating a training programme becomes systematic and easy.

Very often, participants' feedback alone is taken as training evaluation, which need not necessarily show the effectiveness of the training. The impact of training is most tangible and subtle which is not visible immediately. So, it is essential to have adequate monitoring after the training for a period of time on its adequacy and utility, which may be an indicator for further training.



*Figure: Evaluation Model for Designing Teacher Training Programmes for Teachers Imparting Vocational Education*

### **Teaching Learning Process**

The selection of appropriate channels of communication, adequate exposure to the message, the ability to meet the expectations created is crucial for the success of the course. These are to be examined keeping in view the resources and community.

The institutions have to adequately assess the quality and quantity, as well as the timeliness of the production of requisite materials. Insufficient or less relevant course materials can adversely affect the quality of the programme because in most cases the course materials guide the instructional process.

Adopting and/or adapting course materials from other institutions may help in a short term. However, issues of cost, relevance and updating of materials to cope with the changes in context or milieu need to be taken into consideration.

Strategies to ensure adequate utilization of both external and internal facilities, in the production of quality materials and efficient delivery of course materials need to be explored and implemented.

The way in which the information is imparted has to correspond to the target groups' special needs and preferences and thus have to be thoroughly researched upon. For example, informal and interpersonal counseling and the provision of information in clear, uncomplicated language may be indicated for selected target groups such as backward sections of society. Professional audiences on the other hand, may require formal presentations; seminars, workshops, courses, technical literature or regular consultation services through specialists may be more meaningful.

### **Monitoring of the Programme**

There is also a need to devise mechanisms for dissemination of information about the programmes and assessing the enrolment, completion rates, drop out rates and the continued monitoring of students' progress.

### **Pricing the Course**

Prices fulfill various marketing functions. For one thing, they regulate the target groups' access to the course. The higher the price, the fewer students can afford a course. Particularly in India, higher prices impede access whereas lower prices facilitate it. If a new course is to be introduced, and to be made widely popular, then there is a need for conducting a thorough study to find out about the pricing of the course.

### **Conclusion**

Vocational Education through open schooling is expanding faster than ever before cutting across national boundaries. It is being facilitated by revolutionary developments in informational technology and by the fact that the communication technologies are affordable for learners. Strategic planning involving quality management, collaboration, research and proper coordination, is a key factor for a success of vocational education through open and distance learning education system. There is strong need for giving priority to quality assurance in terms of systematic planning identifying learner needs, evolving divergent target group specific self-learning material using multi-media based learning packages towards reducing the isolation between the learner and the teacher and adoption of flexible pattern of evaluation. Thus

keeping in view the important parameters of ODL system, it is essential that an appropriate research strategy/design may be adopted for making the vocational courses through ODL successful.

### References

- APIED: Training of Distance Education Personnel (1984): A Report of a Regional Seminar, Bangkok: UNESCO Regional Office for Education in Asia and Pasific,1984.
- Bates A.W. (1995): Technology, Open Learning and Distance Education, London: Routledge
- Chaffe-Stengel, P. (1992). Integrated program review: Lessons from assessment practices and Experiences in California State University, in *Barak, R. J., & Sweeney, J. D. (1995). Academic program review in planning, budgeting, and assessment. New Directions for Institutional Research*, 1995(86), p- 3.
- Koul, P (2005). Counseling in Distance Nursing Education – Perception of Learners Counseling and Programme Incharges. *Indian Journal of Open Learning* . Volume 14, Number 2
- Menon, M.B. (1998), Open Learning and Distance Education India – An Introspection, *Indian Journal of Open Learning*, Vol. 7, No. 3, p.237-244
- Mukhopadhyay, M and Philips, S (ed.): Open Schooling: Selected Experiences, Vancouver: The Commonwealth of Learning,1994.
- Mukhopadhyay, M (1989): Preparation of Personnel for Open Learning System” in Rao,S.K.(ed.),Open Learning System: Concepts and Future, New Delhi: Lancer International,1989.
- Nasar, A., Rahman, A., Shah, A. A., Alam, M. S., & Alam, M. S. (2005). Skills for development: A study of vocational programme in livestock and poultry through distance mode. *Indian Journal of Open Learning*, 14(2), 139-149.
- Prasad, V (1994): “ Staff Training for Distance Education Systems: Some Issues, *Indian Journal of Open Schooling*, 1994,3(1),1-4
- Sujatha, K (2002), Distance Education at Secondary Level in India, the National Open School, International Institute of Educational Planning and Administration, UNESCO, Paris.
- UNESCO. (1996): *Learning: The Treasure Within*. Report to UNESCO of the International Commission on Education for the Twenty-First Century. Paris: UNESCO.
- Venkataiah, N (1989) Preparation of Course Materials for Distance Education : Course Team Approach, *Indian Educational Review*, Vol. 24, No. 4 p.39-46