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# COMOSA Journal of Open Schooling

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### AIMS AND OBJECTIVES

The COMOSA Journal of Open Schooling is a peer reviewed international journal committed to school education through open learning methodologies. The journal is inter nationally contributed, abstracted and subscribed. The affairs of the COMOSA Journal of Open Schooling are being managed with the help of an Editorial Advisory Board, and an Editorial Board, placed at NIOS, India.

The aims and objectives of the Journal are:

- to provide a forum across the Commonwealth Countries for scholarly discussion on concerns and issues in Open Schooling/Open Learning.
- to disseminate research, theory and practices including inter-disciplinary studies.

The COMOSA Journal includes research papers, articles, review of research, review of Books on Open and Distance Education and highlights programmes and activities in Open Schooling in Commonwealth Countries.

The research papers may inter alia reflect need of the study, objectives, research methodology including sample and results of the study. The researches may be empirical, archival, historical etc.

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## Managing Editor's Note

Commonwealth Open Schooling Association (COMOSA) , is a non-profit, democratic, collaborative and futuristic organization based on mutual respect and committed to support the efforts of open schooling institutions. The basic objective of the association is to cooperate and collaborate in development, promotion and introduction of innovative, high quality, relevant, equitable, gender-sensitive and cost-effective programmes of school education for sustainable development in commonwealth countries through Open and Distance Learning Mode, and thereby targeting to achieve the Millennium Development Goals (MDG) of the United Nations.

The Association aims at achieving a number of outcomes. One of these is sharing of resources by compiling, publishing and distributing research and other materials. The Journal provides a forum to the member countries to mutually benefit by sharing views, activities, research and innovations, etc. I am happy to share the news that the COMOSA Journal of Open Schooling has been registered and assigned **Number ISSN 0976-0407**.

The present issue of the COMOSA Journal has several articles/papers on varied themes which cover different aspects of Open and Distance Learning across the commonwealth countries.

The paper on **Integrating Academic and Vocational Education: Making the Link through National Vocational Education Qualifications Framework** focuses around reviewing the steps taken in India to integrate academic education and vocational education and training through NVEQF. It also examines the potential effects of the implementation of NVEQF in schools and offers directions for future work.

The paper on **Using Skill Standards for Developing an Integrated Curriculum** discusses academic and industry skill standards with a view to designing an integrated curriculum. It points out the strategic implications, and attempts to provide illustrations about how academic and industry skill standards can keep integration activities focused on clear, well-defined educational objectives.

The paper on **“A Study on the Attitude of Secondary School Students towards Vocational Education”** based on a research study conducted Visakhapatnam district of Andhra Pradesh. The study has a finding that majority of the students are interested to pursue vocational education, however significant differences were found in the scores on attitude between boys and girls and between rural and urban students.

The paper on **critical issues in the recognition, validation and accreditation (RVA) of non-formal and informal learning international perspectives** discusses some of the findings emerging from studies conducted by the UNESCO Institute for Lifelong Learning, Hamburg, and through the international exchange of experience in the field recognition, validation and accreditation of non-formal and informal learning.

The paper on **“The study of perception of academic counsellors towards electronic media assisted distance learning courseware: Some experiences with the academic counsellors of the School of Distance Education, University of Calicut, Kerala”** is based on a study on the evaluation of application of electronic media courseware by the School of Distance Education, University of Calicut (SDE-UoC), Kerala and the perception of academic counsellors of SDE-UoC towards electronic media assisted distance education .

The paper on **Introduction of Credit System in School Curriculum: An NIOS Perspective** looks into the possibilities of conversion to a credit system in NIOS for its educational programmes in general and vocational certificates and diplomas in particular. For this purpose it takes into account the existing programme structure of NIOS and suggests corrective policy measures

There is a review of the book on **Quality Assurance and Accreditation in Distance Education and e-Learning:Models, Policies and Research** authored by **Insung Jung and Colin Latchem**. The review points out that the book brings home how widespread the QA movement is in distance education, and how many countries and regions are struggling with similar issues. The individual chapters on what’s happening in countries and regions as diverse as Indonesia, Korea, the European Union, Australia, Asia and North America are worth reading. A report on Capacity Building Workshop for Tutors of National Institute of Open Schooling Using Blended Learning Model is also included.

The contributors of this issue of the Journal deserve special thanks for their valuable contribution on varied themes. I appreciate the hard work of the Editorial Board of COMOSA and Printing Unit of NIOS for bringing out this issue of the Journal. We look forward to receive articles for the forthcoming issues of COMOSA. We invite comments and suggestions for quality improvement of this Journal.

Best Wishes !

(Dr. Kuldeep Agarwal)  
Director (Academic), NIOS  
&  
Treasurer, COMOSA

## **Integrating Academic and Vocational Education: Making the Link through National Vocational Education Qualifications Framework**

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### **Abstract**

In the globalised and knowledge-based economy, both general academic education and vocational education and training in India are being criticised for not serving the purpose of providing necessary competencies to the people. On one hand, the academic education is criticised for providing curriculum that lacks participatory forms of learning and opportunities for students to connect learning to 'real world' events, on the other hand vocational education and training is criticised for preparing workers who lack problem-solving abilities, higher-order thinking skills and employability skills. The employers' complain that they do not get people with employable skills. People have become 'overeducated' for the jobs which require skills, as a result there are more educated unemployed than the uneducated employed. Students in both schools and higher education institutions have very limited choice of choosing the courses from different subject areas and to decide their career pathway.

The challenge today is to make both academic education and vocational education and training relevant and flexible to meet the needs of the learner and employers so that relevant competencies could be acquired by the students at every stage of learning. There is a need to make academic education more 'relevant' to the 'world of work', which includes economic, social, political and educational spheres. Introduction of National Vocational Education Qualifications Framework (NVEQF) has been identified as an instrument which could integrate academic education and vocational education and training. The two key components of NVEQF are (i) Recognition of Prior Learning and (ii) Promotion of Lifelong Learning. NVEQF will seemingly provide a common reference framework for linking various vocational qualifications and setting common principles and guidelines for a nationally recognised qualification system. This paper reviews the steps taken in India

to integrate academic education and vocational education and training through NVEQF. It also examines the potential effects of the implementation of NVEQF in schools and offers directions for future work.

**Key words:** NVEQF, RPL, Lifelong Learning

## **Introduction**

The introduction of VEP in general education schools was considered to be an attempt to economise the resources for infrastructure, utilisation of common resources and building a connection with the elite group for changing the life situation of ordinary people, but it resulted in a substantial divide between academic and vocational education and low esteem granted to vocational education. Similar situation exists in colleges and universities where 'vocational subjects' were introduced with a view to provide vocational skills in addition to the academic education. The separation of education and training has contributed significantly to the situation where most of the people in the unorganised sector, comprising 90 per cent of the workforce, are under-educated, under-skilled and under-prepared for full participation in social, economic and civic life. According to the report of the National Focus Group on Work Education 'the issue of the relationship between the "world of work" and the "world of knowledge" in the emerging discourse stands either marginalized or trivialized as one of merely training students in vocational skills and preparation of workforce for the market' (footnote, NCERT 2007: 7).

The CSS on Vocationalisation of Secondary Education created an intake capacity of about 10.3 lakh students in about 9619 schools. There are about 6800 higher secondary schools in different states/UTs enrolling about 4,00,000 students in the VEP, utilising just 40 per cent of the available enrolment capacity. These schools offer more than 100 courses in areas such as agriculture, business and commerce, humanities, engineering and technology, home science and health and paramedical. In addition, more than 80 vocational courses are offered through the open and distance learning mode in broad areas by the National Institute of Open Schooling (NIOS) under the Ministry of Human Resources Development (MHRD). One of the factors responsible for the low impact of VEP in schools is the lack of opportunities for the vocational students for professional growth and career advancement. The VEP at +2 level acted as a 'dead end', as a majority of the vocational courses are terminal in nature. Lack of opportunities for 'vertical mobility' has been seen as a major impediment for attracting students to skill training in schools. The students have very limited choice of choosing the courses from different subject areas and to decide their career pathway.

The technical and higher education, with a rigid and straight jacket education system does not provide a seamless pathway for those who wish to pursue a career in an occupation. In most universities, options are restricted to pre-defined group of subjects and the syllabus often reflects what teachers can teach rather than what is required (Bansal 2009). There are no clearly agreed 'admission criteria' for students wishing to progress from VEP of a school to a programme offered by polytechnics or higher education institutions. Vertical mobility needs to be provided to the vocational passouts at +2 level through specially designed industry driven diploma, degree and professional degree courses. Allowing academically good students in the vocational education track to proceed onto higher education will ensure that the vocational stream is not seen as a last resort by prospective students.

India has a younger population as compared to other countries and its median age in 2000 was less than 24, compared to 38 for Europe, 30 for China and 41 for Japan. The total number of young working age (15–24) people who continued in educational institutions doubled from about 30 million in 2004–5 to over 60 million in 2009–10. The labour force in India is expected to increase by 32 per cent over the next twenty years, while it will decline by 4 per cent in industrialised countries and by nearly 5 per cent in China (Planning Commission 2011). While there are 12.8 million new entrants into the workforce every year, the existing training capacity is only 3.1 million per year. The challenge is to expand the skill development infrastructure to provide skills to an additional 9.7 million persons per year. The Indian Government has set the target to skill 500 million people by 2022 through a mix of public, private and Public-Private Partnership (PPP) interventions.

The phenomenal increase in the role of technology and computerisation in a majority of tasks has not only increased the productivity and quality, but also generated demand for a highly skilled 'human resource'. Skills have to be developed for a range of levels and occupational structure in industry, including micro, small, medium and large enterprises. Schools have not been able to meet the needs of 'highly skilled workers', even in advanced countries as opportunities for specialised and hi-tech training are very few due to lack of industries around the schools and the syllabi are too broad to meet the requirements for handling advanced and new technologies.

### **Linking Academic and Vocational Education: The Emerging Perspective**

On one hand, the academic education is criticised for providing curriculum that lacks participatory forms of learning and opportunities for students to connect learning to 'real world' events, on the other hand vocational education and training is criticised for preparing workers who lack problem-solving

abilities, higher-order thinking skills and employability skills. The teaching of general academic subjects in classroom provides basic knowledge and understanding but does not serve the purpose of providing experiential learning or activity-based learning for application of knowledge at workplace. There is a need to make general education more 'relevant' to the 'world of work', which includes economic, social, political and educational spheres. Vocational education should, therefore, be made accessible in some form or the other to 'all students', both at school and higher education institutions to make general education more relevant for the world of work. Thus, the challenge is to make education and training flexible, relevant and contextual to the needs of the learner.

Compartmentalisation of education has alienated the teachers and students from thinking beyond the boundaries of disciplines or subjects. In the age of globalisation and consumerism, disciplines like history, humanities, anthropology, political science, philosophy etc. needed for personal and social development are seen to have fairly limited scope in terms of career and employment opportunities. The need today is to introduce a 'new vocationalism' which links academic and vocational courses in such a way that the relevant generic and employability skills could be acquired by all students for a smooth 'transition from school to work'. Vocationalism is defined as the practice of organising curriculum in such a way as to provide students with the opportunity to develop skills, both vocational and academic, that will give them the strategic labour market advantages needed to compete for good jobs (Gray 1996).

Whilst academic standards describe the knowledge and skills that students should acquire through academic subjects such as language, arts, science, mathematics, social studies, etc., workplace skill standards describes the knowledge and skills that an individual should acquire for performing tasks in a particular field or occupation. Combining academic standards and workplace skill standards to support a unified approach to education and training in the current education systems will, however, be a challenging task. Bridging the differences between the general academic education and VET would require bringing all general academic and vocational courses within a coherent curriculum framework under broad industry or social sector groupings. According to Raffe (2002) the three approaches that could be adopted to achieve this are (i) Additive approach, which involves increasing the number of academic or general courses within the vocational education programme, as in Hungary, Japan, Norway, Sweden, etc. (ii) Menu approach, which involves offering students with a menu of options drawn from both academic and vocational education programme. The students can then select units from vocational and academic subjects, based on their liking, to achieve the

required number of credits for the programme, as in countries such as Australia, England and Finland. In these countries, general and vocational schools collaborate to offer a curriculum in which general students can take modules in vocational schools and vocational students can take modules in general schools. (iii) Integrative approach, which aims to create a new kind of curriculum, rather than simply mix academic and vocational elements. Examples include the career clusters and career academies in some American high schools, and projects in the German and Austrian dual systems which aim to exploit the potential of vocational training for general learning. Organisational unification will, however, involve bringing academic and vocational study under a single national Ministry or create common arrangements for funding, administration, regulation and quality assurance. It may involve qualification frameworks, designed to make it easier to carry credit from one learning episode to another and to move between general and vocational programmes.

Major interventions that would be needed at the secondary and higher secondary stage in terms of integrating academic and vocational education would include modularisation of academic and vocational courses, identification of new skill-based courses, removal of obsolete courses, development of courses based on demands of the industry and social sectors, integration of academic and vocational curriculums, competency-based education and training of teachers and students, improvements in classroom processes, flexibility in teaching and training, use of measurable and observable indicators for assessment of learning, greater involvement of industry as partners in teaching, training and assessment, efficient monitoring mechanisms for quality assurance, greater use of Information Communication Technology (ICT) for sharing of information and enhanced funding.

### **Modularisation: A Major Shift in Paradigm**

The National Curriculum Framework (NCF) 2000 and 2005 recommended that the VEP should provide multiple entry and exit points with built in credit accumulation facility. It should offer flexible and modular certificate and diploma courses of varying durations (including short durations) emerging from the contextual socio-economic scenario. Each course should also have an academic component (or a provision for a bridge course or both) in order to ensure lateral and vertical linkages with academic and professional programmes. All modular VET courses should be brought within a coherent qualifications framework under broad industry groupings. The modular curriculum provides continuity and fits in the concept of lifelong learning. It also helps to develop a seamless pathway between elementary, secondary and tertiary education and training (NCERT 2000; 2005).

Vocational curriculums were developed with traditional, theoretical and methodological framework using an objective-based approach. There is a need to introduce modular curriculum for an integrated and comprehensive form of learning. Modules can be individually assessed and be combined in a way to form a 'partial' or a 'full qualification'. It can also help in promoting interdisciplinary studies. The modular curriculum could be delineated into four major areas: general academic knowledge, technical/domain specific knowledge, and work integrated learning. Students can select and combine the modules according to the specified training goals. Specialised subjects could be added according to the needs of specific study fields in the latter part of the schooling that is at the higher secondary stage. Provisions have to be made for 'supplementary' or 'bridging' courses through open and distance learning mode. These bridge courses can be used to supplement general academic studies for those who wish to enter skill development programmes or prepare for higher education. Modularisation of general and vocational education will be a major shift in the paradigm and therefore, should be seen as a long term strategy. It would require major policy changes and modifications in the education and employment structure.

### **Outcome-Based Education and Training**

Competency Based Education and Training (CBET), which is about assisting individuals to acquire skills, knowledge and abilities so that they are able to perform a task to a specified standard (competency or occupation standard) under certain conditions is a structured approach to education, training and assessment that is directed towards achieving specific 'learning outcomes'. It involves 'off-the-job learning' in institution and 'on-the-job learning' in workplace. There is a need to shift the teaching-learning process from a 'content-based input' approach to a 'competence-based output' approach where certification validates the achieved competence. Competence is defined as the knowledge, skills, traits, attitudes, self-concepts, values or motives directly related to job performance or important life outcomes and shown to differentiate between superior and average performers (McClelland 1973). The emphasis is on 'performing' rather than just 'knowing'.

Competency-based education and training is not a new approach but has gained popularity in many developed and developing countries in the last two decades as an approach to effectively promote multi-skilling through a National VET system. Competency-based and process-oriented materials to facilitate self-learning and self-directed learning experiences in both the formal and the alternative education modes will have to be developed for CBET.

### **Continuous and Comprehensive Assessment of Competencies**

In the traditional assessment system, prevalent in schools, absolute marks or grades are awarded. On completion of the studies, students are awarded a certificate inherently implying that they have attained certain competencies whereas in fact they have not. Instead of absolute marks used to qualify or disqualify a person, the competency based assessment reflects on the individual's performance and capabilities to move towards the identified learning objectives. Learners advance through the system when they are able to demonstrate attainment of the desired 'learning outcomes'. Written tests, designed to assess knowledge, are to be integrated with the 'performance tests' based on a set of performance criteria/indicator for core and ancillary skills. For example, when teaching 'word processing', the teacher should also assess the ability of the students to type the words at 40 or 80 words per minute. A teacher can calculate the typing speed by setting time manually or by using a software. The teacher can assess the 'performance gap' and take remedial measures for filling the gap and help the student to achieve mastery level of skill. The focus should, therefore, be on achieving outcomes and development of ability. The assessment should encourage the learner to learn and improve his/her competency.

### **Competent Teachers and Trainers**

Teaching in majority of schools is teacher-centred, instead of student-centred. The learning process is focused on simply telling children what they should 'know' rather than what they should 'know and do'. This is being done due to lack of adequate infrastructural facilities, tools, equipment, raw materials and competent teachers for imparting a variety of core and ancillary skills. Teachers have to be lifelong learners and they should strive for upgrading their competencies continuously so that they can transfer skills to the students and continuously upgrade their skills. Induction training programmes in the industry will have to be conducted regularly for the newly recruited teachers and trainers, besides in-service training programmes for developing competent teachers and professionals in VET. The present pre-service and in-service teacher training programmes continue to be prototype, with little emphasis on outcome-based teaching and competency development. Teachers need to be trained in pedagogy that support activity-based learning, including problem solving, cooperative or team-based projects, lessons requiring multiple forms of expression, and project work that draws on knowledge and skills. Academic teachers should cooperate with vocational teachers in teaching academic content in courses. Similarly, vocational teachers must cooperate with academic teachers in imparting vocational skills to the students of courses for connecting academic learning with vocational skills.

## **National Vocational Education Qualifications Framework: Building a Coherent System of Skill Development**

A National Skill Development Mission launched in the Eleventh Five-Year Plan (2007-2012) has brought about a paradigm shift in handling skill development programmes. It has clearly defined core principles and put in place a coordinated action plan on skill development. The 'Coordinated Action on Skill Development' is being promoted through a three-tier institutional structure consisting of (i) Prime Minister's National Council on Skill Development, (ii) National Skill Development Coordination Board (NSDCB) and (iii) National Skill Development Corporation (NSDC) set up in early 2008. The Prime Minister's National Council on Skill Development has spelled out policy advice, and direction in the form of 'Core Principles'. The National Policy on Skill Development 2009 identifies National Vocational Qualification Framework as the main instrument for linking various education and training pathways (GOI 2009). The NSDC has been assigned to fund skill development programmes under PPP model and to set up Sector Skills Councils (SSCs) in various economic sectors. The SSCs will identify skill gaps, provide benchmarks or National Occupation Standards (NOS), arrange training of students in the industry or workplace, arrange apprenticeship training, and collaborate in assessment and certification of competencies in the respective sector.

The NVEQF developed by the MHRD, Government of India is a descriptive framework that provides a common reference for linking various qualifications (AICTE 2011). It will be used for setting common principles and guidelines for a nationally recognised qualification system covering schools, vocational education and training institutions, technical education institutions and universities/colleges. It is a clear, coherent and comprehensive national system of vocational qualifications, which is relevant to the needs of employment and the individual. The coherent system would require all programmes from the school to higher education be linked to create a series of sequential education and training programmes that individuals can use to progress from relatively low levels of skill to higher levels of skill. Creating vertical career ladders would require suitable articulation mechanisms between the existing education systems. The process of developing a comprehensive system would require agreements among different stakeholders including VET providers and industry in the design and delivery of education and training. The proposed NVEQF is organised as a series of levels of learning achievements, arranged in ascending order from 1 to 10 levels. Levels depend on the complexity of learning; 1 is the least complex and 10 the most complex. A broad framework beginning from Class 9 (NVEQ level 1) to Diploma (NVEQ level 5) in polytechnics and advanced diploma and degrees (NVEQ levels 6-10) in

colleges and universities has been developed. Each level on the NVEQF is described by a statement of learning known as a 'level descriptor'. The parameters that are considered for description of levels include the following: (i) Process that a qualification holder is required to carry out, (ii) Competencies (knowledge, skills and ability) that a person should possess, and (iii) Responsibility that a person should own at that level. There will be two routes to obtain NVEQ certificate:

- (i) **Recognition of Prior Learning:** Recognition of Prior Learning (RPL) is a process whereby individuals' learning, wherever and however it has taken place, is assessed and recognised. If the candidate could prove his/her ability with adequate evidence of his/her competencies pertaining to qualifications stipulated in the National Occupation Standard (NOS), then the candidate is eligible to receive NVEQ certificate through RPL.
- (ii) **Lifelong Learning:** The integrated and coherent framework of courses offered at various levels, relevant to the needs of the individuals and the employers, will provide opportunity to a learner to become a lifelong learner.

The key approaches to the implementation of the framework are (1) to recognise workplace skills, (2) include more occupationally relevant competencies and entrepreneurship development in learning, (3) emphasise applied learning in academic courses, (4) contextualise learning, and (5) develop linkages between qualifications for seamless career pathway.

### **Way Forward**

Schools will have to play a critical role in closing the potential competency gaps and preparing competent individuals for the world of work under the NVEQF. A systematic identification of competency gaps and competency needs would be needed to develop NOS by the SSCs. Based on the NOS, competency based curriculum and training packages are to be developed for organising competency based education and training and assessment. The NOS becomes significant in the context of recognition or accreditation of prior learning, development of competency based curriculums, transparency in training and assessment, selection of employees, setting wages for individuals and encouraging self-directed learning. Development of separate road map may be required for each industry sector to streamline the implementation of various aspects of NVEQF in the sector (Mehrotra 2011).

Till the academic education system is restructured to suit the concept of modularisation and semesterisation, it is proposed that a Vocational Qualification Package comprising of Units of about 200 teaching hours at

NVEQ level 1 and 2 and 300 teaching hours at NVEQ level 3 and 4 may be offered as an add on course along with the general education subjects. At NVEQ level 1 and 2, competencies for work preparation should be imparted for building a strong foundation for specialised vocational competencies to be developed at NVEQ level 3 and 4 (Tables 1–5). At NVEQ level 3 and 4 lower order occupational competencies comprising technical skill, human relation skills and employability skills may be developed for entry level occupations in a sector. Steps need to be taken for developing and introducing 'Qualification Packages' comprising 'Units'. Learners would be required to complete a prescribed number of units for a 'full qualification'. Academic units (competencies related to communication, mathematics, science, social science, humanities, etc.), generic skill units (life skills and employability skills) and vocational skill units (skills related to an occupation) should be a part of the course. Exposing students to various skills related to job-settings or workplace situations through an 'internship programme' will aid in their understanding of the importance of job-related skills. At the university and post-degree levels, vocational education should become professional education and provide opportunities for higher order occupational competencies through appropriate diploma and degree programmes.

**Table 1: Proposed Modifications in the Scheme of Studies of Class IX and X for Academic and Vocational Integration**

S.No.	Subjects in the Existing General Education System	Proposed System under NVEQF–NVEQ level 1 and 2	Marks
1.	<b>Group A</b> English	<b>Group A</b> English	100
2.	<b>Group B (any one)</b> Hindi, Sanskrit, Regional Language	<b>Group B (any one)</b> Hindi, Sanskrit, Regional Language	100
3.	<b>Group C</b> Mathematics	<b>Group C</b> Mathematics	100
4.	General Science	General Science	100
5.	Social Studies	Social Studies	100
6.	<b>Additional Subjects</b> Physical and Health Education Computer Literacy Program Work Experience	<b>Group D (any one VQP)</b> Vocational Qualifications Package (comprising Units) – Broad based competencies (generic) related to Information Technology, Organized Retail, Automobile Technology, Security Services, Agriculture, Handicrafts, Hospitality and Tourism, Construction, Banking and Financial Service, etc. for Work Preparation. plus Internship programme (to expose students to workplace & work practices). Bridge courses on Literacy, Numeracy and IT skills.	100

**Table 2: Proposed Modifications in the Scheme of Studies of Class XI and XII (Science Stream) for Academic and Vocational Integration**

S.No.	Subjects in the Existing General Education System	Proposed System under NVEQF–NVEQ level 3 and 4	Marks
1.	<b>Group A</b> English	<b>Group A</b> English	100
2.	<b>Group B</b> Physics	<b>Group B</b> Physics	100
3.	Chemistry	Chemistry	100
4.	Mathematics/Biology	Mathematics/Biology	100
5.	<b>Additional Subjects</b> Physical and Health Education Computer Literacy Program Work Experience	<b>Group D (any one VQP)</b> Vocational Qualifications Package (comprising Units) – Occupational competencies related to Information Technology, Organized Retail, Automobile Technology, Security Services, Agriculture, Handicrafts, Hospitality and Tourism, Construction, Banking and Financial Service, etc. Plus Internship Programme (to provide opportunity to receive mentoring and instructions on Industry recognized skills as specified in NOS, with focus on organizational structure and culture). Bridge courses on Literacy, Numeracy and IT skills.	100

**Table 3: Proposed Modifications in the Scheme of Studies of Class XI and XII (Commerce Stream) for Academic and Vocational Integration**

S.No.	Subjects in the Existing General Education System	Proposed System under NVEQF–NVEQ level 1 and 2	Marks
1.	<b>Group A</b> English	<b>Group A</b> English	100
2.	<b>Group B</b> Accountancy	<b>Group B</b> Accountancy	100
3.	Business Studies	Business Studies	100
4.	Economics	Economics	100
5.	<b>Additional Subjects (Optional)</b> Physical and Health Education Accounts Hindi Sanskrit Computer Science	<b>Group D (any one VQP)</b> Vocational Qualifications Package (comprising Units) – Broad based competencies (generic) related to Information Technology, Organized Retail, Automobile Technology, Security Services, Agriculture, Handicrafts, Hospitality and Tourism, Construction, Banking and Financial Service, etc. for Work Preparation. plus Internship programme (to expose students to workplace & work practices). Bridge courses on Literacy, Numeracy and IT skills.	100

**Table 4: Proposed Modifications in the Scheme of Studies of Class XI and XII (Humanities Stream) for Academic and Vocational Integration**

S.No.	Subjects in the Existing General Education System	Proposed System under NVEQF–NVEQ level 3 and 4	Marks
1.	<b>Group A</b> English	<b>Group A</b> English	100
2.	<b>Group B</b> Geography	<b>Group B</b> Geography	100
3.	History	History	100
4.	Economics	Economics	100
5.	<b>Additional Subjects</b> Physical and Health Education Accounts Hindi Sanskrit Computer Science	<b>Group D (any one VQP)</b> (i) Vocational Qualifications Package (comprising Units) – Occupational competencies related to Information Technology, Organized Retailing, Automobile Technology, Agriculture, Security Services, etc. plus (ii) Internship Programme (to provide opportunity to receive mentoring and instructions on Industry recognized skills as specified in NOS, with focus on organizational structure and culture). (iii) Bridge courses on Literacy, Numeracy and IT skills.	100

**Table 5: Proposed Modifications in the Scheme of Studies of Class XI and XII (Vocational Stream) for Academic and Vocational Integration**

S.No.	Subjects in the Existing General Education System	Proposed System under NVEQF–NVEQ level 3 and 4	Marks
1.	<b>Group A</b> English/Regional Languages	<b>Group A</b> English/Regional Languages	100
2.	<b>Group B</b> General Foundation Course	<b>Group B</b> Vocational Qualifications Package on Generic Vocational Course (knowledge and skills that cut across various specific occupations or occupational grouping - comprising Units on Workplace Communication, Accounting, Entrepreneurship Development, Job Seeking Skills, Environment Education, Life Skills, Personality Development).	100
3.	<b>Group C</b> Vocational Elective (6 papers – 3 papers in Class XI and 3 papers in Class XII)	<b>Group C</b> (i) Vocational Qualifications Package (comprising Units) – Occupational competencies related to Information Technology, Organized Retailing, Automobile Technology, Agriculture, Security Services, etc. plus (ii) Internship Programme (to provide opportunity to receive mentoring and instructions on Industry recognized skills, as specified in NOS, with focus on organizational structure and culture).	100
4.	<b>Additional Subjects</b> Physical and Health Education Hindi Sanskrit Computer Science	<b>Additional Subjects/ Bridging Programmes</b> Physical and Health Education Hindi Sanskrit Computer Science  Bridging programmes in Academic subjects offered through Open and Distance Learning Mode for admission to higher education courses	100

The NVEQF is being advocated, piloted and adopted. It will bring about necessary fusion between the general academic and vocational education. It is propounded that the NVEQF will also promote parity of esteem between vocational and general education. A clear division of roles and responsibilities will have to be worked out and the stakeholders have to be orientated and trained in shouldering the responsibility of implementing the changes. Greater involvement of industry and enterprises in financing and training would be required to achieve the objective of providing relevant and quality education and training. They will have to play a critical role in internship programmes, on-the-job training and organised apprenticeship training. The existing administrative set up at the national and state level will have to be reorganised and made responsible for policy, norms and standards, planning, provision of budgetary resources and the management for implementing the guidelines of the NVEQF. Several new structures have to be set up by the state governments for a coordinated action between the stakeholders from government, industry and employers in the implementation of NVEQ system. Education and Training Providers (ETP) will have a vital role to play in the envisaged educational reform. Each ETP will have to identify the qualification packages that they would like to offer, identify industry or organisations with which linkages would be established, arrange training packages to be used, ensure linkages with the higher level NVEQs for the qualification package to be offered by them, ensure availability of assessors for the assessment of competencies, report results, maintain records including student portfolio and adopt feedback procedures for quality assurance. Guidance and counselling cell will have to be established in each education and training providers for providing effective guidance services to the students by a qualified counsellor. State Boards of Education will have to set up a separate vocational cell in the board to implement various elements of the NVEQF. They will have to adopt or adapt the competency based curriculum and training packages developed at the National level in consultation with the Sector Skills Councils. They will have to organise teachers' orientation and training programme in collaboration with National level agencies such as National Council of Education Research and Training and PSS Central Institute of Vocational Education.

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## **Using Skill Standards for Developing an Integrated Curriculum**

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### **Abstract**

The 21st century has seen much change in the demands of life and work. The whole economy has moved from being a manufacturing economy to a knowledge-based and service-based one. In this situation, the question that arises is: how are we preparing learners for an ever changing market place? Should learners be prepared for a job for life?

It is clear that we need to prepare learners with the skills, knowledge and personal qualities that makes them adaptable and flexible so that whatever their jobs, they can actually learn new skills, as also acquire what is required to move forward as the work changes. Hence, with dramatic changes in the nature of the labour market, curriculum change is also inevitable. There is no doubt that the curriculum needs to evolve and change, with the goal being of meeting changing demands.

This essay discusses academic and industry skill standards with a view to designing an integrated curriculum. It points out the strategic implications, and attempts to provide illustrations about how academic and industry skill standards can keep integration activities focused on clear, well-defined educational objectives.

**Key words:** skill standards, integrated curriculum.

### **Introduction:**

#### Realising the Need

In the recent years of debate over school reform, the relationship between education and work has been a critical issue. This has found a place in various policy documents of different countries. In India, the National Policy on Education (NPE), 1986 (revised 1992), states that

A critical development issue today is the continuous upgradation of skills so as to produce manpower resources of the kind and the number required by the society. Special emphasis will, therefore, be laid on the organisation of employment/self-employment oriented and need and interest based vocational and skill training programmes (p. 12).

Further NPE reiterates that

The introduction of systematic, well planned and rigorously implemented programmes of vocational education is crucial...[it is] meant to develop a healthy attitude amongst students towards work and life, to enhance individual employability, to reduce the mismatch between demand and supply of skilled manpower, and to provide an alternative for those intending to pursue higher education without particular interest or purpose (p. 16).

It is evident that the policy makers did envisage that facilities of secondary and vocational education should conform broadly to the requirements of the developing economy and real employment opportunities. However, since then, their directives have not been implemented in the true sense. It is found that approximately 80% of the workforce in rural and urban India does not possess any identifiable marketable skills.<sup>1</sup>

Having looked into this situation in some detail, and having recognised that countries with higher and better levels of skills adjust more effectively to the challenges and opportunities in the world of work, the Government has formulated a National Policy on Skill Development for the exponential expansion of the current capacity for skills development with a view to achieving its target of imparting requisite skills to 500 million people by 2022. The salient features of this policy include setting up a system which

- ◆ Is driven by demand from the labour market.
- ◆ Focuses on new and emerging occupations and promotes excellence.
- ◆ Inculcates competencies that are in line with nationally and internationally recognized standards.
- ◆ Lays emphasis on research and planning
- ◆ Provides adequate participation opportunities to women, disabled persons, and economically backward sections of society.

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<sup>1</sup>[http://www.ey.com/Publication/vwLUAssets/EY\\_FICCI\\_Skills\\_for\\_India\\_2020/\\$FILE/EY\\_FICCI\\_Skills\\_for\\_India\\_2020.pdf](http://www.ey.com/Publication/vwLUAssets/EY_FICCI_Skills_for_India_2020/$FILE/EY_FICCI_Skills_for_India_2020.pdf)

It is evident that, to fulfil the objectives of the National Policy on Skill Development, there have to be multiple pathways and schemes. With the apparent need for transition from a supply-driven to a demand-driven model in India, much depends on the nature of the curriculum which needs to evolve and change with the purpose of meeting such changing demands. Curriculum change is inevitable.

Thus, the question that arises is: what is the nature of this changed curriculum that will assist in creating market-linked employability opportunities? The rest of this essay attempts to throw some light on this aspect by considering skill standards and integration.

### **Understanding Skill Standards**

Skill standard does not have a common, universally accepted definition; nor is there one, common usage of the term standard. There are many definitions of a skill standard. Generally, skill standards are associated with an industry or occupation, or some subset or combination of these. According to Losh (2000), a skill standard is defined as follows:

An operational definition of competent performance stated in such a fashion that an expert in the area of interest can determine competent vs. noncompeting performance, and peers agree on the judgment of the expert. The stated level of performance must not be ambiguous, and experts in the area must be able to understand the statement.

In other words, skill standards are employer-defined knowledge, and are based on skills that are needed by employees to ensure success on the job. Standards are defined by occupational areas and validated by representatives from the occupation. Standards include the functions, tasks, and performance criteria for a job area; and identify the knowledge, skills, and abilities needed to meet performance expectations.

Among the groups defining skill standards, is the National Skills Standard Board (NSSB) in the USA. The NSSB (1998) defines skill standards as:

The array of work- and worker-oriented information that specifies the critical work functions, key activities, performance standards, skills, and knowledge required to successfully perform in a given occupation or field, and which includes an assessment plan specifying the type and level of performance required for certification on the skill standards. In simple terms, a skill standard specifies what one needs to be able to do and how well one needs to be able to do it (p. 65).

While discussing standards and different types of standards, the National Skill Standards and Assessment Collaborative (1998) states that

A standard is an explicit statement that clearly defines the knowledge and skills and the level of performance expected of an individual in a given context or work area. As a set, standards represent consensus among stakeholders on what is most important for individuals in a field (of study or work) to know and be able to do (p. 16).

This is illustrated as below.

***An Excerpt from the V-TECS Heating, Air Conditioning, and Refrigeration***

***Technician National Skill Standards Publication***

***F022 Skill:*** Calibrate thermostat and set heat anticipator.

***Standard:*** Thermostat must be calibrated according to manufacturer's specifications. Calibrated thermostat must respond to space temperature in which sensing element is located; heat anticipator must function to specifications; and thermostat must control air conditioning equipment to provide desired space temperature. Applicable safety procedures must be followed.

(<http://www.calpro-online.org/eric/docs/losh/losh8.pdf>)

Further National Skill Standards and Assessment Collaborative (1998) also identify two different types of standards: content standards and performance standards.

Content standards identify the areas of knowledge, understanding, and skills which are expected to be learned by individuals in key subject and career areas. Performance standards define and illustrate levels of expected accomplishment with respect to one or more content standards (p. 17).

Thus, we can say that a standard, by definition, identifies what does or does not constitute adequacy. In the case of a skill standard, the standard must identify evaluation criteria to determine an acceptable level of performance, or in some instances, indicators of non-competent performance.

Types of Skill Standards

According to Ananda and Rabinowitz (1995), there are several different types of skill standards, one building upon the other. These are listed below.

- ◆ *Core academic* standards cover those subject areas such as Mathematics, Language Arts, and Science that are necessary for functioning as a member of society, and help develop career-related skills.
- ◆ *Generic workplace readiness* standards cover those skills and qualities that workers must have to learn and adapt to the demands of *any* job. These include personal attributes, interpersonal skills, thinking and problem-solving, communication, and use of technology. (SCANS,1991; CCSSO Workplace Readiness Assessment Consortium, 1993)  
  
<http://www2.ed.gov/pubs/Standards/lessons.html>
- ◆ *Industry core* standards apply to most of occupations in a particular industry. Thus, there are core standards for the hospitality industry that are distinct from core standards for the electronics industry. Industry specific standards are critical to career-preparation programs (e.g., career majors and programs of study).
- ◆ *Occupational family* standards specify the knowledge and skills that are common to a related set of occupations or functions within an industry or across industries. For example, within the health care industry, occupations in the medical laboratory, imaging, and radiography can be thought of as belonging to a larger diagnostic family (or cluster) of occupations. The occupations in this diagnostic family focus on creating a picture of patient health at a single point in time. Whereas individual job-specific requirements may change, depending on changes in the job market as well as changes in the structure of the workplace, occupational family level standards provide a broad base of skills for individuals.
- ◆ *Occupational or job specific standards* address the skill expectations of a specific occupation. This is the level at which many existing career-preparation programs and certification systems are focusing (<http://www2.ed.gov/pubs/Standards/lessons.html>).

In contrast, the Texas Skill Standards Board (2010) states that the three skill standard elements of worker-oriented information include,

- ◆ *Academic Knowledge and Skills*: The knowledge and skills most usually associated with traditional subject areas, such as Reading, Writing,

Mathematics, Science, etc., defined in terms and levels that are relevant to the world of work.

- ◆ *Employability Knowledge and Skills*: The applied knowledge and skills required for effective performance across a range of occupations. These skills and knowledge are sometimes referred to as work-related skills and knowledge, or as cross-functional skills and knowledge.
- ◆ *Occupational Knowledge, Skills and Conditions*: The technical or occupational specific knowledge and skills required to carry out processes or procedures common and critical to the related key activity, and the conditions necessary to carry out the related key activity. Conditions include the tools, resources and equipment necessary to carry out the related key activity and its performance criteria.

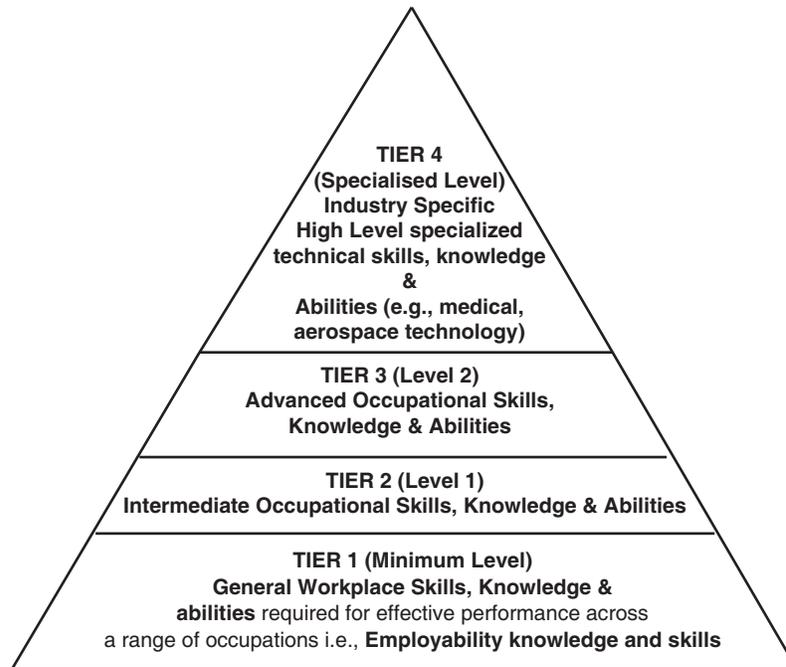
The inclusion of worker-oriented information is critical in defining the whole universe of skills and knowledge required to successfully perform a critical work function and related key activities. This worker-oriented information assists in the construction of relevant training curricula and instruction methods (<http://www.tssb.org/sites/default/files/wwwpages/publications/GuideDevRecUseSS.pdf>).

#### A Framework for Developing a Skill Standard System

The Confederation of Indian Industry (CII) has conducted a study in select sectors of the economy in some States of India, and has projected the requirement of skilled workers at different levels by 2015. For the automobile sector and health sectors, the projection is as below.

<b>S.No</b>	<b>Sector</b>	<b>Demand (in Mn)</b>	<b>Skill Level Break-up</b>
1.	Automobile	2"2.5	Specialised skills – 5% Skill category level II– 25% Skill category level I – 30% Minimal education skilable – 40%
2.	Healthcare	4"4.5	Specialised skills – 10% Skill category level II – 40% Skill category level I – 16% Minimal education skilable – 34%

(<http://labour.nic.in/policy/NationalSkillDevelopmentPolicyMar09.pdf>)



From the above, it is evident that a four tier skill standards system is envisaged which may be illustrated as in Fig 1.

On the bottom of this system (i.e., Tier 1) are employability skills which describe non-technical skills and competencies that have always been an important part of effective and successful participation in the workplace. Employability Skills are specific conceptualisations of what are known more broadly as generic skills. While generic skills all have contextualised applications unique to a work-place and job role, it is important to keep in mind that they are also highly transferable. A generic skill learned or applied in one workplace will also be applicable in another. For example the teamwork skills utilised in a fast food environment are transferable and applicable to working as a waiter in a hotel. The environment and context of the job roles may be different; but an understanding of the relationships between roles and team members is important to both. According to Gibb (2004) as highlighted by Commonwealth of Australia 2006, the common elements of various listings of generic skills are:

- ❖ *Basic/fundamental Skills:* such as literacy, numeracy, using technology
- ❖ *People-related skills:* such as communication, interpersonal, teamwork, customer service skills

- ❖ *Conceptual/thinking skills:* such as collecting and organising information, problem solving, planning and organising, learning-to-learn skills, thinking innovatively and creatively, systems thinking
- ❖ *Personal skills and attributes:* such as being responsible, resourceful and flexible, being able to manage one's own time, having self-esteem
- ❖ *Business skills:* such as innovation skills, enterprise skills
- ❖ *Community skills:* such as civic or citizenship knowledge and skills.

The next two Tiers of the system (i.e., Tier 2 and Tier 3) are skill standards for clusters of occupations requiring skills with level differentiations. They apply across specific industry segments (e.g., automobile manufacturing, furniture manufacturing, airplane manufacturing, etc.) and often cover families of related job titles. This is because each of these groupings include many occupations—there might be a grouping, say, for manufacturing specialists, encompassing a great variety of types of manufacturing jobs, and there might eventually be no more than thirty of these categories covering most of the front-line jobs in the nation.

Considering the Business sector, there is a great variety of occupations like Financial manager, Financial analyst, Budget Analyst, Accountants and Auditors, Book keeping, Accounting, and Auditing clerks, etc. However, some are intermediate or associated occupations for advancement to a goal or focus occupation. If Budget Analysis is the focus occupation, then the associated intermediate occupation is Book keeping, Accounting, and Auditing clerks. If Financial Analysis is the focus occupation, then the intermediate occupation for advancement is Budget Analysts or Accountants and Auditors. But Budget analysts and Accountants and Auditors are transferable occupations. This implies that the actual standards for what one would have to know and be able to do in each category, and how well one would have to be able to do it, are defined by the requirements of high performance work-organizations. This would also help define the Levels in which one is expected to think, and to contribute a lot to the value and improvement of the product or service. To illustrate this further, economics and accounting, mathematics, and administration and management are the highest-rated knowledge elements for Budget Analysts. Although Book Keeping, Accounting, and Auditing Clerks need knowledge of economics and accounting it is well below what would be required of a Budget Analyst. The same can be said for Mathematics, and the deficiency in administration and management is even more pronounced. However, although the two occupations are at different

levels, many of the skill elements that are the most important for Budget Analysts are also important for Bookkeeping, Accounting, and Auditing Clerks.

Tier 4 of skill standards would be the most complex skill standards performed by the experienced practitioner. These would be the ones that most generally would be learned through extensive on-the-job experience or training programs offered directly by the business or industry. It is standards for individual jobs  $\frac{3}{4}$  like the operator of a machine that performs lithographic functions in the semiconductor fabrication business. The standards are set by individual firms for the way work is to be done in that firm. A good example is the standards Boeing sets for the tolerances and failure rates in the construction of its new 777 airplanes.

From the framework it is evident that, since skill standards are derived from the real world, they provide a natural content base for contextual instruction. Standards-based scenarios provide a rich context for the integration of academic and vocational education.

### **Integrated Curriculum: Meaning and requirement**

When the new world of work requires the use of holistic, integrated skills and competencies rather than discrete competencies and isolated skill sets, the tendency to isolate knowledge within a discipline works against the need for interdisciplinary skills that success in the workplace requires. Therefore, the foundation that provides a basis for educational programs is the industry skill standards. One of the keys to the development of a curriculum informed by industry skill standards is integration. This involves the explicit identification of both the technical knowledge and the foundation skills appropriate for a particular program. They are both then integrated into learning activities that allow for the development of foundation skills within the context of solving real problems. The learner sees the context for learning foundation skills as well as the technical knowledge. Being an effective team member, problem solver, and self-learner has a purpose, context, and connection that provide motivation for holistic learning.

Thus, considering the emphasis on the ability to solve problems that require drawing on all competencies and applying them in ever changing contexts, competency- or a performance-based curriculum informed by industry skill standards improves the correspondence between workplace requirements and educational preparation, thus resulting in a better skilled workforce. For example, an academic skill for a laboratory technician might be the ability to write in complete, meaningful sentences where as a lab technician's vocational skill might involve placing entries into a log book. Although these two skills

are interdependent, they are generally thought of as separate. However, the fact that a lab technician can write complete meaningful sentences in a paper for a science course may be of little use in the workplace; for the skill to have any value, the technician must be able to utilize, transfer, or apply this 'academic' ability as written communication in a 'real' setting. In other words, using a log book involves the worker's discretion about the importance of relaying information to colleagues as well as the ability to communicate the information that the organization needs now, and in the future. An independently functioning lab technician (similar to physician logging information onto a patient's chart) must be able to assess a situation, decide what information is important enough to include in a log book, and document that information in an understandable fashion.

A systematic approach to the integration of academic and vocational education can, thus, reduce the duplication of educational efforts, and establish commonalities among academic disciplines and workforce requirements.

However, combining academic standards and workplace skill standards to support the development of an integrated curriculum that gives students the opportunity to apply a wide range of academic knowledge and skills to work-based situations is not easy. The development of an integrated curriculum will thus, require the following:

- ◆ Discussions with the standards developed by academics and industry to keep integration focused on clearly stated educational objectives. Standards will also help guide the assessment that accompanies the activity.
- ◆ Interactions between academic and vocational/technical teachers, as well as industry representatives to elevate substance and practice among both groups. As a result, the academic standards will become more concrete and accessible to more students; the industry standards can be raised well beyond the entry-level focus that has typified most of these efforts to date. Moreover, academic and vocational teachers will tend to gain some new respect for each other's substantive domains and instructional practices. Both groups are essential to the success of this process since neither academic nor vocational teachers can accomplish successful, rigorous integration alone.

### **The Way Forward: Some Suggestions**

As mentioned earlier, connections between academic content standards and workplace skill standards are not easy. They need to follow a sequence of events as suggested below:

- ◆ Identify broad skills and competencies that cut across specific occupations or occupational groupings. In particular, identify the Mathematics, Language, and Reading skills that are needed for success in any career, and build a basic curriculum that all students are expected to master. Identify which academic standards these skills and competencies address, and when they occur in the curriculum.
- ◆ Identify the advanced skills that cut across occupations within broad career pathways for inclusion in a career-oriented curriculum in secondary school. Identify the academic skills and competencies that these advanced skills address, and at what grade level they are taught in the curriculum.
- ◆ Work with the business and industry to identify the practical skills that could best be learned in work-based experiences but which require instruction first.
- ◆ Within each occupation or occupational cluster, identify the practical skills that should be taught in post-secondary programs, and the academic skills that are needed to reinforce those practical skills.
- ◆ In the general curriculum, identify and include instruction, contexts, and problems from real work situations that can be used to demonstrate and teach general skills and knowledge. For the general curriculum, a wide variety of contexts should be used as a way to expose students to a range of careers.
- ◆ Identify the work-related uses of knowledge and skills, including advanced skills, and incorporate these connections in the instruction (e.g., the uses of Geometry and Physics in construction, the relation of physical properties of matter to the development of tools and machinery, the connection between physiology and medical machinery, and the roles of regulation and democratic control in business operations).
- ◆ Include instruction in basic workplace skills at the appropriate level. For example, skills such as being on time, communicating with others, working in a team, wearing appropriate dress, and so on, can be taught from an early level. More explicit ways of relating these skills to the workplace can be taught in later levels. These basic workplace skills can be reinforced through work-based learning experiences.

## Conclusions

The fast changing workplace requires workers to utilize sophisticated technical knowledge to solve problems that are constantly changing. The integration of technical content with foundation skills in the teaching/learning process provides realistic applications, portability of skills across experiences, and increases relevance for learners. The traditional boundaries among the academic disciplines and occupational cluster areas tend to foster fragmentation; they do not always allow for a meaningful approach to learning skills and knowledge in context. As mentioned earlier, the tendency to isolate knowledge within a discipline works against the need for interdisciplinary skills that success in the workplace requires. This isolation also creates a barrier to the integration of curricula using real-life examples, as desired.

According to Prescott (1996), the Integrated Curricula will address the changing workplace by offering career-preparation pathways that

- ❖ *are organized around career clusters*, which are occupations/groupings based on common core competencies;
- ❖ *are built on workplace and employability standards* validated by business, industry, and labour, and academic standards that assure students of a firm
- ❖ educational base;
- ❖ *built on a strong foundation* of contextual, cognitive, and work-related skills by integrating academic and technical education;
- ❖ *prepare learners for an ever-changing work world* via the enhanced transfer of cognitive and technical skills across multiple occupations;
- ❖ *include authentic assessment components* that verify what a job seeker actually knows and can do in relation to the standards; and
- ❖ *provide for multiple exit points* to work and re-entry points to career preparation from school through an associate degree.

Skill standards provide the information needed to direct curriculum development efforts to the latest technology and techniques of business and industry. Thus, using industry skill standards as the foundation for curricula will result in a closer alignment between educational programs and workplace expectations, and result in a better skilled workforce.

As cited by Roger et al. (2007), John Dewey argued that, in formulating the relationship between so-called 'Vocational' and 'Academic' education, the

primary consideration must be the democratic goals of schooling. In other words, 'vocational' and 'academic' are neither competing emphases, nor should either stand alone; rather, they are two goals that together serve greater social, economic, and democratic ends.

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## **A Study on the Attitude of Secondary School Students towards Vocational Education**

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### **Abstract**

Vocational Education and Training (VET) plays an important role in empowering individuals to become self-reliant and to increase production and productivity through acquisition of skills needed to perform tasks. The National Policy on Education (1986) has accorded very high priority to the programme of 'Vocationalisation of Education'. It states that the vocational education intended to prepare students for identified occupations spanning several areas of activity and that vocational courses will ordinarily be provided after the secondary stage, but keeping the scheme flexible, they may also be available after Class VIII. National Curriculum Framework 2005 (NCERT 2005) has suggested that VET may be conceived as a major national programme to be implemented in the mission mode. VET in this new perspective will be built upon the bedrock of 10–12 years of work-centred education in the school system, rather than as a strategy for diverting students away from the 'academic' stream. Hence the investigator made a study to know the attitudes of secondary school students towards vocational education. The study was conducted in Visakhapatnam district of Andhra Pradesh covering students of secondary schools. It was found that the secondary school students had positive attitudes towards vocational education. Majority of the students are interested to pursue vocational education, however significant differences were found in the scores on attitude between boys and girls and between rural and urban students.

**Key words:** VET; NPE; NCF 2005.

These rapid changes in technologies and financial markets, emergence of global economies, products and services, growing international competition, new forms of business and management practices are creating new paradigms for the workforce. India is referred to as a 'young nation', with a population of 28 million youth added every year. If India wants to develop a workforce

which can meet the skills demand of a growing economy and if it wants to give a competitive advantage to its workforce on the global front, it is imperative that its VET system be restructured. For vocational education to play its part effectively in the changing global environment, it is imperative to redefine the objectives of vocational education and training and to make it flexible, contemporary, relevant, inclusive and creative. The government realises the importance of strengthening and revamping the vocational education sector and has already taken a number of important initiatives in this area. Vocational education can no longer be terminal in nature. It needs to be redefined as a preparatory stage for the vocational students to enter the portals of a university education. A unified system of vocational education from secondary education to university education is the need of the hour.

The National Curriculum Framework 2005 (NCERT 2005) has suggested that VET may be conceived as a major national programme to be implemented in a missionary mode. Vocational Education and Training (VET) in this new perspective will be built upon the bedrock of 10–12 years of work-centred education in the school system, rather than as a strategy for diverting students away from the 'academic' stream. The National Skill Development Policy 2009 has proposed the following features for Vocational Education Framework:

- a) Competency-based qualifications and certification on the basis of nationally agreed standards and criteria.
- b) Certification for learning achievement and qualification.
- c) A range of national qualification levels – based on criteria with respect to responsibility, complexity of activities, and transferability of competencies.
- d) Modular character where achievement can be made in small steps and accumulated for gaining recognisable qualification.
- e) Open and flexible system which will permit competent individuals to accumulate their knowledge and skill through testing and certification into higher diploma and degree.
- f) Different learning pathways—academic and vocational that integrate formal and non formal learning, learning in the workplace and that offer vertical mobility from vocational to academic learning.
- g) Compatibility of general educational and vocational qualifications at appropriate levels.

The Government of India at the national level released 'National Vocational Education Qualifications Framework (NVEQF)' (2011) developed by the Ministry of Human Resources Development (MHRD) is a descriptive framework that provides a common reference for linking various qualifications. It will set common principles and guidelines for a nationally recognised qualification system covering schools, vocational education and training institutions, technical education institutions, and universities/colleges. The framework provides for recognition of prior learning and flexibility in programmes, delivery mode and training design, and diversity in the range of courses and training options. The essence of the recommendations made by various commissions and committees is that vocationalisation should be the main feature of the future system of education at the secondary stage, and can be extended to school level also. Secondary and higher secondary education are important terminal stages in the system of general education because it is at these points that the youth decide whether or not to pursue higher education, opt for technical training or join the workforce. Educationists and experts have consistently recommended that education at these stages should be given an occupational bias to link it with the world of employment.

In India VET is delivered through a variety of government and non-government agencies, at central and state levels. Under the Centrally Sponsored Scheme (CSS) which was launched in 1988 vocationalisation of secondary education is to be implemented by the states/UTs for the formal sector and by the Non-Government Organizations (NGOs)/Voluntary Organizations (VOs) in the non-formal sector. The basic objectives of the scheme were

- (i) to provide diversification of educational opportunities so as to enhance individual employability;
- (ii) to reduce the mismatch between demand and supply of skilled human resource, and
- (iii) to provide an alternative for those pursuing higher education.

Since the inception of this scheme 9619 schools across India, with about 21,000 sections have been created, with an intake capacity of about 10.3 lakh students. This scheme was implemented in all states but without uniformity or success. The objective of introducing vocational education at secondary school level was to provide pre-vocational training to the students which would help to orient them with the world of work. In many states the schools associated with the local school boards implemented only a handful of

vocational subjects at the secondary level, that too, as an optional subject. As a result, the scheme failed to gain popularity as a viable alternative at the secondary level. The scheme also introduced vocational education courses at +2 level that is, Classes XI and XII (HSC). At present more than 150 competency based vocational courses have been developed by the Central Institute of Vocational Education (PSSCIVE) at Bhopal. These vocational courses have been introduced in senior secondary schools at the plus two level. The government envisaged that a large pool of employable youth between 16–18 years would be generated through this alternative stream. There are about 1.6 crore children at the +2 level out of which it is envisaged that about 25 per cent (that is, 40 lakh students) may divert into vocational stream. According to the survey conducted by Operations Research Group, 1996, the proportionate share of vocational students vis-à-vis total enrolment at higher secondary stage was 4.8 per cent and 28 per cent of the vocational pass outs were employed or self-employed. It is apparent that the vocational education courses available at higher secondary level have been unable to attract a large student population as compared to the conventional education courses due to various reasons.

About 80 courses are on offer in the broad areas of Agriculture, Engineering and Technology, Health and Paramedical, Home Science and Hospitality Management, Computer and Information Technology, Business and Commerce etc. in National Institute of Open Schooling (NIOS) through a network of Accredited Vocational Institutes.

### **Need and Importance of the Present Study**

There are 220 million children who go to school in India. Of these only around 12 per cent students reach the university. There is a high dropout rate at secondary level. The dropout rate rises substantially after Class VIII and further more after Class X. Herein comes the relevance and role of vocational education, since that is one thing that will link education with employability. It would also retain more children in the secondary and higher secondary levels. In fact, it is noticed that many school children are not comfortable with theoretical subjects but at the same time are inherently inclined to some skill or hobby. Such students will especially find the vocational education system attractive if introduced at secondary stage. The national policy planners have also considered secondary stage of school education as crucial as it is at this stage that necessary skills and competencies are acquired which enable the students to enter the world of work or to go for higher education. The

government intends to reorganise the vocational education system and is planning to integrate the academic courses with vocational education in secondary schools. The attitude of the individuals plays a vital role in pursuing education or choosing a career. The success of the vocational education courses introduced at secondary level depends upon the attitude of the students. Hence the investigator made a study to know the attitudes of secondary school students towards vocational education.

### **Review of Related Literature**

The review of related literature helps to determine the scope of the problem and furnish the information pertaining to chosen study. There were adequate researches available in the field of vocational education and training but not much studies related to secondary school students. Most of these literatures belong to foreign studies. Therefore the investigator had to rely more on text books journals and web resources.

### **Objectives**

- To measure and understand the attitudes of secondary school students towards vocational education.
- To study the influence of personal and demographic variables on the attitudes of secondary school students towards vocational education.
- To study whether there exists any difference in the attitudes of secondary school towards vocational education in respect of their gender, locality, medium of instruction, type of school management, socio-economic status, etc

### **Hypotheses of the Study**

- There exists no significant difference between boys and girls of secondary schools in their attitude towards vocational education.
- There exists no significant difference in the attitude towards vocational education between the students studying in rural an urban secondary schools.
- There would not be any significant difference in the attitude towards vocational education between the secondary school students studying in Telugu and English medium.

- There would not be any significant difference in the attitude towards vocational education between the students studying in government and private secondary schools.
- There would not be any significant difference in the attitude towards vocational education between the students belonging to affluent families and those living below the poverty line.
- The educational qualification of the parents would not significantly influence the attitudes of secondary school students towards vocational education.
- The occupational status of the parents would not significantly influence the attitudes of secondary school students towards vocational education.
- There would not be any significant difference among the secondary school students belonging to different caste groups in their attitudes towards vocational education.

### **Design of the Research**

The present study is an attitudinal study of descriptive nature made on the basis of data gathered through field investigation. This investigation was undertaken to find out the attitude of secondary school students towards vocational education.

### **Sample**

The sample for this investigation was 150 secondary school students who have been studying in Class X from 10 different schools selected randomly from Visakhapatnam district of Andhra Pradesh. This sample of 150 students studying in secondary schools is found to have the following sub-samples: (i) Boys (N= 75), (ii) Girls (N=75), (iii) students studying in Rural schools (N=90), (iv) students studying in Urban schools (N=60), (v) students studying in Telugu medium (N=120), (vi) students studying in English Medium (N=30), (vii) students studying in Government schools (N=120), (viii) students studying in Private schools (N=30).

### **Tools employed**

The Vocational Education Attitude Scale (VEAS) based on the Likerts method developed by Absalom was improvised and adopted by investigator for the measuring attitudes of secondary school students. Twenty items in the scale were selected keeping in mind the maturity level of secondary school students.

Each statement had five options, namely 'Strongly Agree', 'Agree', 'Undecided', 'Disagree', 'Strongly Disagree'. The information about personal and demographic variables was collected through a carefully planned personal data sheet developed by the investigator which is incorporated in the beginning of the attitude scale.

### **Collection of data**

For the purpose of collecting data required for the investigation, the investigator visited ten different secondary schools in Visakhapatnam district selected randomly. The sample of the students was selected by simple random method. The students were explained the purpose of this research and requested to respond to the VEAS. They were also asked to fill up the personal data sheet. Care has been taken to avoid copying.

### **Delimitations of the study**

Due to the time constraint the investigator had chosen limited sample and it was confined to the Grade/ Class X students only. Later it was delimited to collect the data from the students studying in rural and urban schools of Visakhapatnam district of Andhra Pradesh state.

### **Statistical Treatment of the Data**

The means and standard deviations of the attitude towards vocational education were computed directly from the respective raw scores for the entire sample and its sub-samples of the secondary school students with the help of computer. The analysis of variance (F-test) and T-ratio were also calculated in order to study if there was any significant difference in the attitudes of secondary school students towards vocational education with respect of gender, locality, medium of instruction, type of school management, socio- economic status, etc.

### **Analysis and interpretation of data**

To check whether there exists any significant difference in the mean scores of attitudes of secondary school students in respect to gender, locality, medium of instruction, type of school management, socio-economic status, etc. the analysis of variance (F-test) and T-test were used. These differences are found to be significant at 0.05 and 0.01 levels. Data and results of the test of significance of the difference between mean scores of the attitudes of secondary school students towards vocational education based on the relevant sub-samples of interfering variables are shown in the following table.

**Table : Significance of difference between mean scores of attitudes of secondary school students towards vocational education based relevant sub-samples of interfering variables.**

Category	Variable	N	Mean	S.D.	Critical Ratio	Remarks at @0.05 level
<b>Gender</b>	Boys	75	69.14	7.84	<i>t'-value</i> *2.675	Significant
	Girls	75	72.68	8.36		
<b>Locality</b>	Rural	90	73.36	8.25	<i>t'-value</i> *3.422	Significant
	Urban	60	68.45	9.12		
<b>Medium of instruction</b>	Telugu	120	71.34	9.62	<i>t'-value</i> 0.465	Not Significant
	English	30	70.46	7.63		
<b>Management of the institution</b>	Govt.	105	73.65	8.68	<i>t'-value</i> *3.305	Significant
	Private	45	68.14	7.53		
<b>Economical Status of the family (based on the parents annual income)</b>	BPL(Below Poverty Line) White card Holders	94	72.85	9.32	<i>t'-value</i> *2.686	Significant
	APL(Above Poverty Line) -Pink card Holders	56	68.92	7.43		
<b>Parents' educational status</b>	UG/PG/ Professional courses	32	69.38	7.62	<i>F'-value</i> 1.298	Not Significant
	SSC/Inter	53	72.46	9.25		
	Below SC/ Illiterates	65	70.85	8.74		
<b>Parents occupational status</b>	Secured job Agriculture/ Business/	26	67.85	6.32	<i>F'-value</i> *5.049	Significant
	Self employed	89	73.89	9.02		
	Labourer	35	70.94	7.13		
<b>Caste</b>	OC	28	69.14	6.36	<i>F'-value</i> 1.042	Not Significant
	OBC	95	71.28	9.32		
	SC/ST	27	72.32	6.18		

## Results and discussion

1. From the above table it was understood that there existed a significant difference between the attitudes of secondary school boys and girls towards vocational education. The mean value of boys is 69.14 and mean value of girls was 72.68. The CR value for gender category is 2.675, which is significant at 0.05 level. It clearly indicates that boys and girls differ significantly in their attitude towards vocational education.
2. With regard to the locality of the school the mean value of the students studying in rural schools was 73.36 and the mean value of students studying in urban schools was 68.45. The CR value is 3.422, which is significant at 0.05 level. It clearly shows that rural and urban students studying in secondary schools differ significantly in their attitude towards vocational education.
3. With regard to the medium of instruction the mean value of the students studying in Telugu medium schools was 71.34 and the mean value of students studying in English medium was 70.46. The CR value is 0.465 which is not statistically significant. Hence we can conclude that Telugu and English medium students studying in secondary schools do not differ significantly in their attitude towards vocational education.
4. With regard to the type of the school management, the mean value of the students studying in government schools was 73.65 and the mean value of students studying in private schools was 68.14 .The CR value is 3.305, which is significant at 0.05 level. It clearly shows that students studying in government and private secondary schools differ significantly in their attitude towards vocational education
5. With regard to the economical status of parents, the mean value of the students parents who are Below Poverty Line (BPL families having White card issued by the Andhra Pradesh Government) was 72.85 and the mean value of the student parents who are Above Poverty Line (APL families having Pink card issued by the Andhra Pradesh Government) was 68.92. The CR value is 2.686, which is significant at 0.05 level. It clearly shows that students' parents annual income significantly influences in the attitude towards vocational education.
6. With regard to the parents' educational status, the mean value of the students parents having Under Graduate/Postgraduate/Professional qualifications was 69.38 and the mean value of the students' parents having Inter/ SSC qualification was 72.46 and the mean value of the

parents having below SSC qualification was 70.85. The F value is 1.298, which is not statistically significant. It clearly shows that parents' education significantly influence the attitude of secondary school students towards vocational education.

7. With regard to the parents' occupational status, the mean value of the students' parents having secured (permanent job) was 67.85 and the mean value of the students' parents having engaged in self employment/ Agriculture/ Business was 73.89 and the mean value of the parents working as labourers was 70.94. The F value 5.049, which is statically very significant. It clearly shows that parents' occupational status significantly influence the attitude of secondary school students towards vocational education.
8. With regard to caste of the students belonging to the mean value of the OC students was 69.14 and the mean value of students belonging to OBC was 71.28. The mean value of the students belonging to SC/ ST was 72.32. The F value is 1.042 which is not statistically significant. It clearly shows that students of secondary schools belonging to different caste groups do not differ significantly in their attitude towards vocational education.

### **Major findings of the study**

The findings of the study are summarised as follows.

- 1) The secondary school students had shown more favourable attitude towards vocational education.
- 2) The boys and girls studying in secondary schools differ significantly in their attitude towards vocational education. Girls had shown more positive attitude towards vocational education at secondary level.
- 3) The students studying in rural an urban secondary schools differ significantly in their attitude towards vocational education.
- 4) Medium of instruction had no impact on the attitude towards vocational education and there is no significant difference in attitude towards vocational education between the students studying Telugu and English medium schools.
- 5) The students studying in government and private secondary schools differ significantly in their attitude towards vocational Education. Students of government schools had shown more favourable attitude towards pursuing vocational education at secondary level.

- 6) The parents' annual income had significant influence on the attitude of the secondary school students towards vocational education.
- 7) It was found that there would not be any significant difference in the attitudes of secondary school students towards vocational education whose parents possess different educational status.
- 8) The occupational status of the parents had significant influence on the attitudes of secondary school students towards vocational education.
- 9) It was found that there was no significant difference in the attitudes of secondary school students belonging to different caste groups towards vocational education.

### **Conclusion**

On the basis of the results of the data the following conclusions are drawn. The secondary school students had shown favourable attitude towards vocational education. It was found that girls had more positive attitude than boys towards vocational education. It also concluded that students studying in rural schools and in government schools had favourable attitude towards vocational education when compared with urban schools and private schools. The economical and occupational status of the parents had significant impact on the secondary school students' attitudes towards vocational education. The study has greater educational importance. Specialised courses in vocational education should be introduced for girls at the secondary level. Priority should be given for introduction of vocational education courses in rural government schools. For this purpose the present VET in secondary schools should be restructured and reorganised as envisaged in NVEQF. Students should be provided opportunity to pursue the vocational courses along with their academic courses in secondary schools. Steps should be taken to reform the curriculum for the Vocationalization of Secondary Education.

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## **CRITICAL ISSUES IN THE RECOGNITION, VALIDATION AND ACCREDITATION (RVA) OF NON-FORMAL AND INFORMAL LEARNING INTERNATIONAL PERSPECTIVES**

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**Key Words:** Life Long Learning, Recognition, Validation and Accreditation

### **Introduction**

Lifelong learning emphasises the integration of learning and living—in life-wide contexts across family and community settings, in study, work and leisure, and throughout an individual's life. Today, in a complex and fast-changing world, it is necessary for individuals to acquire and adapt competences (knowledge, skills and attitudes) through all forms of learning to cope with various challenges. However, qualifications systems in many societies still focus on formal learning in educational institutions. One of the greatest challenges that countries face with respect to lifelong learning and learning societies at the end of the first decade of the twenty-first century is how to approach the question of the Recognition, Validation, and Accreditation (RVA) of learning that occurs outside formal education.

The paper starts with an overview of key concepts, it then enumerates some of the findings emerging from studies conducted by the UNESCO Institute for Lifelong Learning, Hamburg, and through the international exchange of experience in the field recognition, validation and accreditation of non-formal and informal learning (Singh, 2008, 2009, 2011, 2012; Singh and Duvekot, 2012; Steenekamp and Singh, 2012; UIL 2005, 2011, 2012). It will become apparent from examples, that across the developing and developed world, that countries are vastly different, not only in size but also in terms of the social, economic and educational as well as demographic challenges. However to facilitate comparisons between the countries it will be useful to look at differences and common features in terms of the following areas of analysis:

1. Policy and legislation
2. The educational, economic and social uses of RVA
3. Stakeholder involvement
4. The nature of national reference points for RVA
5. Features of recognition processes
6. Impact and outcomes
7. Challenges

### **Key Concepts and Definitions**

This section provides an overview of the key concepts in the development of RVA framework. Starting with a discussion of the key dimensions of lifelong learning as a holistic approach, it continues with a reflection of national qualifications framework as a key pillar for lifelong learning. The section on RVA starts with the different terms used for RVA by the countries as well as the different interests, agendas and directions of RVA studies among the various international organisations, notably European Union (EU) and Organisation for Economic Cooperation and Development (OECD). It then clarifies the terms recognition, validation and accreditation.

### **Lifelong Learning**

Lifelong learning can be described as a standard that promotes learning on a holistic basis, counters inequalities in educational opportunities, as well as raises the quality of learning. Lifelong learning implies the linkages between various learning settings and serves social, policy, cultural and economic purposes. Formal, non-formal and informal have become the core concepts within the lifelong learning approach. The following definition is used by UNESCO (UIL, 2012).

- ❖ Formal learning takes place in education and training institutions, and recognised by relevant national authorities leading to diplomas and qualifications. Formal learning is structured according to educational arrangements such as curricula, qualifications and teaching-learning requirements.
- ❖ Non-formal learning is learning that is in addition or alternative to formal learning. In some cases, it is also structured according to educational and training arrangements, but more flexible. It usually takes place in community-based settings, the workplace and through the activities of civil society organisations. Through the recognition, validation and

accreditation process, non-formal learning can also lead to qualifications and other recognitions.

- ❖ Informal learning is learning that occurs in daily life, in the family, in the workplace, in communities and through interests and activities of individuals. Through the recognition, validation and accreditation process, competences gained in informal learning can be made visible and can contribute to qualifications and other recognitions. In some cases, the term experiential learning is used to refer to informal learning that focuses on learning from experience.

Formal, non-formal and informal learning should not be seen as dichotomous and discrete categories, but rather continuous and making up the 'learning continuum'. As Eraut et al. (2000); Eraut et al, (2004) and Livingston (2005) point out: all learning, whether in formal or non-formal and informal learning contexts, has to do with direct participation and experience in the work; learning is flexible and inclusive of diverse knowledge; learning is political, emancipatory and empowering; and finally, there is motivation to build more clearly articulated assessments of learning in all settings (See Sawchuk, 2009). This means that the skills, knowledge and competences acquired are the same whether the learning is done in formal, non-formal or informal settings or not.

### **Recognition, Validation and Accreditation of Non-Formal and Informal Learning**

UNESCO uses the acronym RVA to refer to the recognition, validation and accreditation of non-formal and informal learning. The concept of RVA is not new. There are decades of practice in countries, most notably in Australia, New Zealand, UK and USA. Different terms are used for RVA in different countries. In some countries such as South Africa, the term Recognition of Prior Learning (RPL) is used. In the United States of America, RVA is referred to as Prior learning Assessment (PLA). In the UK the terms Assessment of Prior Learning (APL) and Accreditation of Prior Experiential Learning (APEL) are used. While APL tends to have a higher education focus and is established as a method of recognising non-formal learning for people who had relevant knowledge and experience but had no qualification through the formal education system. The main characteristics of APEL is that it always and necessarily assesses the individual's competences and skills, and is related to the economic skills agenda (**Porkorny, 2011**). In Canada Prior Learning Assessment and Recognition (PLAR) has been practiced in universities for more than thirty years. In New Zealand various terms such as RPL, Recognition of Current Competency (RCC) as well as APL and credit transfer

are used (Keller, 2012). In Australia, RVA is subsumed under the overarching term of 'credit' and is defined as one of the credit processes (Cameron, 2011). In the Republic of Korea, RVA is an essential element of the Academic Credit bank System (ACBS) (Baik, 2012). In the Philippines, RVA is part of the Equivalency and Accreditation programmes of non-formal and informal learning (UIL, 2011).

### **Different Interests and Agenda**

Amongst the various organisations, the OECD, International Labour Organization (ILO), the Council of Europe's European Centre for the Development of Vocational Training (CEDEFOP) are the most prominent in pioneering RVA the field of skills and competence recognition in the non-formal and informal settings. In the OECD, the term Recognition of Non-formal and Informal Learning (RNFIL) is used (Werquin, 2010).

The dominant perspective of the ILO (2004) is the improving of the skills recognition systems as a crucial means for helping individuals maintain their ability to compete in the labour market, and is reflected in its Recommendation R-195 on a framework for recognition and certification of skills (ILO, 2004).

In the EU, RVA is referred to as Validation of Non-Formal and Informal Learning (VNFIL). Validation is defined as the process of identifying, assessing and recognising a wider range of skills and competences which people develop through their lives in different contexts. An inventory of validation of non-formal and informal learning is produced and updated regularly on behalf of the Commission and Cedefop, with a detailed survey of developments in European countries. The latest inventory was published in 2011 (GSK, 2011).

### **UNESCO Taking the RVA Agenda Forward**

Whereas each of these different organisations with an interest in recognition of non-formal and informal education tend to focus on specific sections of the problem, be they the labour market sector, the TVET and the higher education sectors, the perspective of economic imperatives, the relations to qualifications, or be they European countries or OECD countries alone (as is the case with the ILO, CEDEFOP and the OECD, respectively), the focus of UNESCO is directed at a holistic analysis of RVA, in its fullest sense, promoting RVA as a means to empowering individuals to make meaningful and constructive choices about their lives and to engage in the societies in which they live.

### **UNESCO'S Definition of RVA**

UNESCO uses the acronym RVA to refer to the *recognition, validation and*

*accreditation of the outcomes of non-formal and informal learning*—a practice that makes visible and values the full range of competences (knowledge, skills and attitudes) that individuals have obtained in various contexts, through various means in different phases of their lives. Increased visibility of these learning outcomes may significantly improve individuals' self-esteem, motivate them to further learning and strengthen their labour market position. RVA may help to integrate broader sections of the population into the learning process, and help societies to make better use of their existing human resources. (UIL 2012)

The emphasis is put on all three terms—recognition, validation and accreditation—in order to stress the *integration of outcomes* from non-formal and informal and formal learning as well as the *transfer* of knowledge derived from work, family and leisure activities to access or advanced standing in the mainstream education and training system. Ideally, such mechanisms should have equivalence with formal qualifications and should lead progressively to them:

- ◆ **Recognition** is a process of granting official status to learning outcomes and/or competences, which can lead to the acknowledgement of their value in society.
- ◆ **Validation** is the confirmation by an approved body that learning outcomes or competences acquired by an individual have been assessed against reference points or standards through pre-defined assessment methodologies.
- ◆ **Accreditation** is a process by which an approved body, on the basis of assessment of learning outcomes and/or competences according to different purposes and methods, awards qualifications (certificates, diploma or titles), or grants equivalences, credit units or exemptions, or issues documents such as portfolios of competences. In some cases, the term accreditation applies to the evaluation of the quality of an institution or a programme as a whole (UIL 2012).

**Equivalence** refers to a state of being of equal value. The term is usually used to give equal value to the learning outcomes and competences a learner obtained from outside the formal education and training system with those gained in the formal education and training system. **Competences** indicate a sufficient state of knowledge, skills and attitudes and the ability to apply them in a variety of situations. **Learning outcomes** are achievements of what a learner knows, understands and is able to do as a result of a learning process (UIL 2012).

Several member states have developed national objectives to move towards a lifelong learning strategy. However the implementation of RVA presents several challenges. These are systemic, organisational and individual. In the context of RVA, this *systemic strategy* focuses on creating transparent, flexible and integrated qualifications framework, establishing assessment facilities and focusing on curricula structures and the use of learning outcomes that meet the diverse needs of, for instance linguistic, religious, ethnic, disability-based and gender-based differences. *Individual and organisational strategies* focus on supporting individuals by providing the basis for goal-directed development and career-planning, personal development, self-managed learning and action, and the on-going documentation of their professional and personal development. This means attaching special importance to learner participation and providing an appropriate learning environment (for example, fully accessible institutions and curricula). At the individual and organisational level, there is also a call for changed mindsets amongst teachers, assessors, social partners and national authorities on the use of portfolios for recognition purposes. The type of recognition associated with individual and organisational strategies has less to do with formal certification and more to do with individuals reflecting on, collating, describing and presenting their own skills and competences (Singh 2012).

### **Policy and Legislation**

The country cases show that countries with established systems are also those that have made RVA a top priority in their political agenda, and have policy and legislation that are specifically related to RVA. There is evidence notably from European countries (Czech Republic France, Finland, Denmark, Norway and the Netherlands), of legislation and policies specifically linked to RVA. These usually deal with RVA within the legal framework of the education and training system or as a part of the training policies on the level of economic sectors. In France the strong legal base of RVA gives the right to each individual to have his or her formal, informal and non-formal acquired experience assessed. This entitlement depends on minimal three years of experience related to the desired qualification or degree. The experience has to relate to vocational and professional skills (Paulet, 2012). In Finland, RVA is enabled in national legislation on all levels of education (**Blomquist and Louko, 2012**). In the Czech Republic, the Act on Recognition of Further Education Results is an important lifelong learning strategy. Its major focus has been getting the commitment and the involvement of groups such as employers, ministries, chambers of commerce and trade unions (**Starek, 2012**).

In the economic sphere, policies and collaborative agreements also exist with social partners. In Denmark a partnership agreement in 2007 with the

social partners (employers and employees) enhanced the use of RVA and aimed at creating better opportunities through further education and training programmes by offering workers with low educational backgrounds to have their competences recognised in formal education and training (Andersen and Aagaard, 2012).

In some countries, such as in New Zealand, Mauritius, South Africa and Namibia, RVA legislation and policies are subsumed under regulation relevant for National Qualifications Framework (NQF). In New Zealand, for example, under section 246A (1) of the Education Act there are mechanisms for the recognition of learning, for example, the recognition of learning through qualifications gained and standards met. This ensures that New Zealand qualifications integrate formal, non-formal and informal learning (Keller 2012).

In the Republic of Korea, an act in the context of its Academic Credit Bank System (ACBS) ensures that there is no legal discrimination between university graduates and the degree holders of the Academic Credit Bank System (Baik 2012).

### **The Economic, Social and Educational Uses of RVA**

Evidence from countries shows that RVA has become a policy objective based on concrete contributions to educational, economic and social development. RVA processes are conducted for a number of policy reasons, such as responding to changing demographics, the further development of its knowledge economy, as implementing policies aimed at instituting greater flexibility for adult learners, promoting equality of access and participation in higher education and meeting the requirements of statutory regulations concerning qualifications required for the workplace and continuing professional development needs.

### **Contribution to Educational Development**

In the US, RVA targets broader reforms in educational institutions that support lifelong learning. Creating a diversified education and training system capturing the full significance of alternative learning pathways is regarded as an important contribution of RVA in Mauritius, Botswana, the Seychelles, Namibia and South Africa (Steenekamp and Singh 2012).

RVA linked to re-entry into the formal school education is prevalent in a number of countries. In the Philippines, performance in the Accreditation and Equivalency (A&E) programme is assessed through the A&E Test for elementary/secondary level. In Thailand, the credits accumulated by learners from non-formal and informal programmes are transferable within the same

type or between different types of education, regardless of whether the credits have been accumulated at the same or at different educational institutions, including learning from non-formal or informal education, vocational training or work experience. In Chile, adult education is therefore a modality that permits youngsters and adults to catch up with school studies in special integrated adult education centres that have been in place since the mid-1990s (UIL 2011).

Further education and training is a new site for RVA linked to higher education. In this way, it is possible for countries to ensure vertical mobility of adults beyond initial education. Adults are given a chance not only to return to primary school and receive their initial qualification, but to receive secondary and tertiary education as well. The Republic of Korea offers recognition for learning through ACBS whereby recognition is from informal and experiential learning to academic degrees and qualification certificates. In New Zealand, the New Zealand Qualifications Framework (NZQF) identifies pathways that include 'graduate profiles', which identify the expected learning outcomes of a qualification. 'Education pathways' identify other qualifications that a graduate could enrol into after completing this qualification. 'Employment pathways' or 'contributions to the community' identify the areas in which a graduate may be qualified to work, or the contribution they may make to their community (Keller 2012). In Germany a system has been established for the admission to universities for vocationally qualified applicants (UIL 2011). Denmark has a long tradition of individual competency evaluation. In the past it has resulted in a focus on individual skills identification for: Vocational training (1997); Adult basic education (2001); Vocational education and training programmes (2003). Starting in 2004, an increased focus was placed on RVA, and in August 2007 the educational fields covered by the legislation were expanded to include other educational fields (Anderson and Aagaard 2012). Certifying a certain period of professional experience of adult educators is gaining in popularity in Austria (UIL 2011).

### **Contribution to Economic and Workforce Development, and Employability**

In the African context, where there is a high proportion of persons employed in the informal economy, there is growing tendency to move away from the over emphasis on the diploma pathway to an emphasis on a skills development pathway, as well as change the current skills development logic from one of internal efficiency to one of external efficiency (Savadogo and Walther 2012).

Many countries see the challenge of RVA in the need to align with the needs of stakeholders such as the industry as a means to enhance the economic

capacity of the workforce. Employers are encouraged to invest in the training of those with very low skills, who need to be brought into the productive economy. In Mauritius this can be seen in the concerted efforts by the Mauritius Qualifications Authority (MQA) to implement RVA in four industry sectors. The South African Qualifications Authority (SAQA) guidelines on RVA stress the need for policies and procedures that indicate the purpose of RVA within the industry sectors. Firms within the formal sector pay a training levy that is administered by the Sector Education and Training Authorities (SETA) and is used for RVA (**Samuels et al. 2012**). In France, companies are expected to allocate a training budget equivalent to at least 1.6 per cent of the payroll to training employees (Paulet 2012).

In countries it is usually a few economic sectors where RVA is developed. In Scotland the social services sector has led the way in developing RVA to support workforce development within the context of the Scottish Credit and Qualifications Framework (SCQF). This is the legislative requirements in Scotland for the registration of staff in sectors such as social services and health that require the development of mechanism that will support experienced but unqualified staff to gain the necessary qualification (Whitaker 2011).

The perceived benefits of RVA with regard to workforce development is often conceptualised according to the benefits for the different stakeholders. In Norway, experience so far shows that RVA is often geared at obtaining a trade certificate as many adults have worked in a trade for years without much schooling and with no certificate. For the individual, RVA contributes to more flexibility in working life, for example as to changing jobs, and it eases access to higher education. RVA can lead to an improved standing on the job market, for example, more interesting tasks, better wages, but also to improved social integration through better access to the labour market for those previously excluded (UIL 2011). In New Zealand, the impacts for employers and organisations are that employees become more competent, confident, reflective, analytical, better team members and have better communication skills. Employees experience onsite work-relevant learning and show higher motivation, with overall improved productivity. RVA of existing competencies may lead to an increased willingness among employees to take part in workplace training or learning. RVA procedures may motivate individuals to look upon learning not only in a lifelong sense, but also as a life-wide opportunity. It may also encourage the individual to start new learning experiences (Keller 2012).

Other areas where RVA plays a role in workforce development is in the area of skills recognition and labour mobility across borders. RVA has been shown

to play a role in helping youth and adults to create new employment opportunities abroad. In the Philippines, the certification provided by the Agency for Technical and Vocational Education (TESDA) give the big majority of workers going abroad, who come from poor families, a big help for them to be employed and earn income for their families (UIL 2011).

Many countries such as Canada, that depend on attracting immigrants to fill labour gaps RVA called PLAR is greatly driven by economic and demographic imperatives (Van Kleef 2011). In Mexico, the National System of Competence Standard System (NSCS) is the strategic umbrella that has been created by CONOCER, and under which recognition and accreditation practices should be organised, regulated and implemented. The recognition practices within NSCS are agreed by employers, workers, educators and government, and they ensure that the Mexican society has competent workers in every productive and social activity, for economic growth, educational development, social and ethical progress for everyone (**García-Bullé, 2012**). In the USA, national competence standards describing occupational functions do not exist but individual companies develop competency standards for the purpose of job classification, succession and, assessment and professional development. Regulatory bodies are also active in development competency standards, subject to the Agreement on Internal Trade (Ganzglass et al. 2011).

### **RVA'S Contribution to Social Development**

RVA is seen to have an ability to contribute constructively to the reduction to social inequality. Tackling inequality can be done through a variety of means, some of which attack the problem indirectly whereas others are more direct in their targeting of inequality. Raising the number of people with higher education certificates is one way to promote equality in education.

For many countries without the established basic levels of education amongst their population, equality of educational opportunities must be tackled at a foundational level, it is regarded necessary to increase further learning opportunities in the light of literacy. The incorporation of Adult Basic Education and Training (ABET) system into the South African National Qualifications Framework has allowed adults successful in the mass literacy campaign level to participate in and to take part in the ABET system.

The goal of closing the gap between the educational opportunities for different groups in society is an important goal for many countries. In South Africa one of the purposes of RVA, specifically promoted by trade unions, is redress for past and present discriminatory practices. (Samuels et al. 2012). In New Zealand, for example, the Tertiary Education Strategy 2002–2007 includes

RVA to improve foundation skills in general, including particularly those of Maoris' in order to bring Maori learners into tertiary education and higher education levels (Ministry of Education 2008). In Scotland RVAs and NQFs are linked to career guidance for 'young leavers at risk'. Whittaker describes a project undertaken by 'Skills Development Scotland', which includes 'Careers Scotland', to integrate the Scottish Credit and Qualifications Framework (SCQF) into careers guidance, specifically through the use of RVA (**Whittaker, 2011**).

Helping marginalised groups by making RVA a part Public Employment Services is a practice in Norway (UIL 2011). In the United States, with the Workforce Investment Act (WIA) of 1998 (Public Law 105-220), the Department of education set up a fund for Adult Basic Education (ABE) services to order to encourage the development of pathways for low skilled adults to increase their educational attainment and obtain higher skilled jobs (Tate et al. 2011).

Transferring unemployed workers from one industry sector to another branch has been a practice in Mauritius. In order to implement RVA for unemployed workers, workers from the sugar and textile sectors were retrained for work in the tourism industry by taking into account their prior learning (Allgoo 2012).

In countries with large underprivileged sections of society and without comprehensive RVA system, opening learning opportunities for non-formal and informal learning is already a first step toward RVA. In the Philippines, outcomes of non-formal and informal learning programmes have shown that

- ◆ Learners become leaders of the community because they have increased confidence given increased access to information;
- ◆ They become community educators and organisers helping other people who need education;
- ◆ They learn livelihood skills which enable them to earn income. They learn to participate in community affairs;
- ◆ Parents become involved in the education of their children and learn literacy as well;
- ◆ Learners are able to negotiate with government regarding their rights and claim to social services; and
- ◆ Women become more empowered—become active in community, had more access to information related to health and welfare of children (UIL 2011).

Thus while all countries use RVA to tackle challenges relating to employability, workforce development and social inclusion, there is nevertheless a diversity across North and South countries in the focus of RVA, as well as the extent to which all three needs are integrated in RVA policies.

### **Stakeholder Involvement**

On the level of stakeholders, it will be useful to analyse their involvement by taking a closer look at the aims for the public sector, the private sector, the civil society sector as well as the role of communities of practitioners in adult learning.

In the private sector, it is the social partners (employers and employee associations) that play an essential role. In Norway, the employer bodies and also trade unions are important stakeholders nationally and regionally, both in a drive to realise policy goals and in practice, for example, by offering RVA in the context of apprenticeships and other training schemes in enterprises locally, thus supporting adults in VET schemes (Christensen 2012). In France, social partners are playing an important role in lowering the costs of RVA integrated into training and education of employees (Paulet 2012).

In the public sector, in Norway, it is the responsibility of the county authorities to register all adult candidates who have gone through a validation process at upper secondary level into a national, digital registration system. In Mexico (Garcia-Bullé 2012) public authorities are involved in cross-sectoral activities. The Secretariats of Education, Labour and Economy, which belong to the governance board of CONOCER, the agency responsible for National System of Competence Standards (NSCS) have been working in a coordinated way on issues such as the identification and definition of key sectors of the Mexican economy; adjusting educational curricula to productive sector's needs; and establishing a national system of equivalences between competence with credits of formal education programmes at the vocational or professional levels (Garcia-Bullé 2012).

In the civil society and NGO sector there is evidence from several countries that voluntary organisations are in the forefront of providing non-formal adult learning. In Norway, the Norwegian Association for Adult Learning (NAAL) is an umbrella organisation for adult learning in the non-governmental voluntary sector. This sector is responsible for the RVA of competences and learning outcomes acquired through adult learning (Christensen 2012).

### **Communities of Practitioners in Adult Learning**

In England, the development of RVA derives largely from the adult education

movement of the 1980s, and from the concerns about social justice and widening participation of adults, including the development of 'Access to higher education', the developer of RVA (or APEL, as it is known in the UK). In Canada, adult educators have also been in the forefront of RVA. It was the community of Canadian adult educators who became acquainted with the work of the Council for Adult and Experiential Learning in the United States and began to promote RVA in Canadian post-secondary education. This has been highlighted in a recently article by Van Kleef (2011).

Because of the different interests at stake, some reasons are predominantly economic and related to labour market integration, better utilization of competences within an enterprise, or worker mobility in the informal and formal sectors, while other reasons are related to education and training system reforms, efficiency of education and training systems and transparency of qualifications and certifications. A very important reason for recognition is the integration and empowerment of marginalised populations and individuals (uneducated and unemployed), as well as the motivation for lifelong learning.

### **The Nature of National Reference Points for RVA**

While there is a broad agreement on the positive potential of a learning outcomes approach in national qualifications frameworks and they are considered to be a critical factor in the recognition of non-formal and informal learning, diversity in approaches on the concrete application of the approach are common. Countries differ with regard to whether they reference RVA against existing formal education and training standards or against competence-based national qualifications framework. Within this fundamental division, countries have developed a variety of approaches and alternative reference points suited to their contexts and social and economic needs. In addition, there are divisions between developed and developing countries. To understand the diversity of approaches in the linking of RVA to national reference points, it may be useful to categorise the following approaches:

1. To recognise learning outcomes and competences against standards in the NQFs
2. To recognise an individual's learning outcomes and competences (so far) according to standards of education and training systems that can directly be linked to an already 'nationally established' qualification
3. To recognise an individual's learning outcomes and competences according to competence frameworks specific to work (occupational standards)

4. To recognise the establishment of NQFs in the Technical and Vocational Education and Training (TVET) sector
5. To recognise an individual's learning outcomes and competences against standards for non-formal basic education for adults and young people

The first group consists of countries where learning outcomes are recognised against learning outcomes in the NQF. In New Zealand, South Africa, France and Mauritius the creation of learning outcomes-based national qualifications frameworks has been a key precondition for linking outcomes from non-formal and informal learning to qualifications. In New Zealand these learning outcomes are quality assured before they are linked to the framework. In France the NQF is fully established and linked with the national system for accrediting prior learning outcomes. The national repository of skills descriptions (ROME) was already in 2008 linked for this purpose to the national repository of qualifications (RNCP) (Paulet 2012).

The second group of countries recognises learning outcomes according to standards of education and training that lead to a national qualification. Norway, Denmark, Finland, Malaysia, the Netherlands, the Republic of Korea, the Czech Republic and Portugal are in the process of developing NQFs for this purpose. For the European countries in this group, referencing of national qualifications frameworks to the EQF is seen as an opportunity for integrating non-formal and informal learning outcomes. In Portugal the National Qualifications System and its various elements (RVCC system, New Opportunities Centre and the Catalogue of Qualifications) are, moreover, designed to improve the certification (academic and vocational) levels of adults over eighteen years old (Gomes 2012). In addition to the above European countries, RVA takes place in the context of the existing education and training system in Malaysia and the Republic of Korea where much effort is put into setting up a NQF that is also accessible by means of RVA. The Academic Credit Bank System in the Republic of Korea is an example of this. This 'bank' allows citizens to get accreditation of all their learning outcomes be it from formal, non-formal and informal learning experience (Baik, 2012).

The third group includes countries with approaches that recognise learning outcomes against certificates and qualifications that relate to skills and occupational standards in specific economic sectors. Both Mexico and India are part of this group. This is not to say that they do not have systems of RVA in the general education and training system, but in these two country cases emphasis is laid on the recognition of competences within labour settings,

given the large labour force and informal sectors in their economies (García-Bullé, 2012; Singh, 2012).

The fourth group includes countries with approaches that recognise learning outcomes in relation to NQFs developed in the TVET sector. Namibia, Burkina Faso, Ghana, Trinidad and Tobago, have either developed or are in the process of developing an NQF in the TVET sector. For these countries skills development will be beneficial to further economic and social development. As Allais (2010) points out, the NVQFs are less contentious given their outcomes-orientation of competence-based training as compared with disciplinary and content-driven approaches of general education and university education programmes. NQFs, in these countries are also important for incorporating non-formal basic education levels into NQF as has already been introduced in the South African NQF.

The final category includes the countries that have reported that they still face challenges in establishing reference points for RVA and require technical expertise to develop and implement a NQF (Afghanistan, Bhutan, Syria and Jordan). These countries experience the lack of the NQF as a limiting factor in developing competence frameworks for measuring progression. They are persuading education providers to recognise learning outcomes in the context of non-formal education provision. Meanwhile, they have developed equivalency frameworks aligned to the formal education system to assess non-formal education at the basic level.

In sum, the trend in establishing NQFs is increasing rather than decreasing. However, the linkage of RVA to NQFs still has a long way to go. Many countries still need to put a lot of effort into establishing NQFs with standards and criteria that take into account learning outcomes from non-formal and informal learning experiences. However, as we saw in the above categorisation, alternative frameworks are being developed or implemented that are a response to the existing social, economic and educational challenges. These initiatives could be important stepping stones to incrementally build bridges in the transition to establishing NQFs with full linkage to RVA.

Furthermore it needs to be noted, that NQFs do not in and of themselves generate RVA. Rather, most importantly, they provide an important enabling environment (Dyson and Keating, 2005). For the implementation of RVA to be successful, RVA and qualifications frameworks need to be linked to the real world of learning and working at several levels by:

- (1) developing individual competence portfolios, effective in different settings or contexts;

- (2) linking competence requirements and learning needs to tailor made education (non-formal) offers;
- (3) linking competence requirements in the workplace and voluntary organizations to the content of further education and training (Duvekot and Konrad 2007).

Duvekot and Konrad have conceptualised these linkages by introducing the concept of the 'learning triangle' as the playing field of lifelong learning strategies. Its constituent stakeholders are the individual learner, the organisation in which this learner is active and the education-training institutions; the government and other stakeholders as the overarching members in this process in which the three constituent members discuss and decide on recognition and learning issues, create favourable circumstances in law, regulation and finance. All stakeholders, according to the authors (*ibid.*), have their own respective roles and responsibilities.

### **Features of Recognition Processes**

This section highlights features of RVA citing examples from countries with established systems of RVA. The countries used as examples are Australia, New Zealand, the Republic of Korea, France, Norway, Denmark, Czech Republic, South Africa, Mauritius, the Netherlands and Portugal. Some of these countries have put more emphasis than others on developing assessment by portfolio (Norway, Denmark), other have shown leadership in conceptual development (New Zealand, South Africa). Other countries such as New Zealand have institutionalised the process. Some countries have invested in policies and legislation leading to redress and access in post-apartheid South Africa. While some countries have a long tradition (New Zealand), others have experiences that are more recent. In the following, features of recognition processes pertaining to the above mentioned countries are highlighted.

### **Benchmarks are Used for Assessment**

In any given model for *RVA benchmarks are used for assessment* linked to national, sectoral or other qualifications or standards. Agreed standards of what the RVA is to be measured up against is an important feature of RVA. One example is a general agreement on national curricula. Another example is workplace-specific competence demands. Finland and Portugal for example, have competence-based frameworks for adults that are used as benchmarks for assessment for non-formal and informal learning.

### **Assessment Based on Learning Outcomes and Competences Implies That Approaches to Assessment Will Diversify Beyond Written and Oral Exams**

The assessor is the professional in that he has to be very flexible in being able to meet the many objectives to give a custom-oriented validation and/or valuation of his competences. On top of that the professional should be able to use especially dialogue-based assessment forms. On the basis of the advice of such an assessor further steps for lifelong learning will be set in motion. In Japan, the purpose of assessment is not to select the best, but rather to provide an opportunity to the learners to show what they are able to do. In New Zealand, the identification of learning outcomes is carried out by profiling and facilitation. It entails carefully interviewing potential candidates to find out the qualifications, or parts of qualifications, that best reflect the understanding that they have. A reliable assessment, in the words of Eccleston (1994) is the matchmaking between a portfolio (or demonstration), including a personal and career development plan, and the steps advised by the assessors that is between evidence and measurement against a standard scale.

### **Combining Traditional Methods, Tests with Other Methods Such As Practical Demonstrations Has Allowed Relatively Flexible Procedures**

This requires competent assessors and validation procedures to ensure the authority and reliability of the results. In New Zealand, the identification of learning outcomes is carried out by profiling and facilitation. It entails carefully interviewing potential candidates to find out the qualifications, or parts of qualification, that best reflect the understanding that they have (Keller 2012).

### **An Important Feature of RVA is the Growing Tendency towards Continuity from Formative Assessment to Summative Accreditation**

This can be seen in the steps which are necessary to identify learning outcome equivalencies, such as increasing our understanding of portfolio; quality assurance guidelines; guidance and counselling knowledge; and learning outcome descriptions. In Australia, it normally comprises five identifiable elements which include:

1. the provision of information and support to individuals who may seek to have an RPL assessment;
2. planning and development of RPL processes and practices including determining assessment strategies and evidence requirements;
3. interpreting and understanding units of competence and determining quality assurance mechanisms and feedback arrangements;

4. identifying and assessing background, experiences, learning, skills and competences and the quality and reliability evidence provided;
5. review and appeal mechanisms; and, finally,
6. certifying recognised competences (DEEWR 2008).

### **Both Formative and Summative Assessments are Linked**

While summative recognition leading to, for example, awarding of specific credit within the context of formal programmes is an important function of summative assessment, equally important however is the formative role of RVA in terms of personal growth and development. Acknowledging and making explicit the key outcomes of formative recognition is important (Whittaker 2011). In other words, while there is a clear distinction between formative and summative assessment, they are linked processes and need to be embedded within curriculum design and delivery (ibid.). Formative assessment, in particular, often is a process for supporting the individuals with tailor-made education, on the job training or participation in preparatory training in order to complete an education programme or qualification (Blomquist and Louko 2012). As a result of the differences, countries must be aware of the distinctions as well as the linkages and be clear about how assessment in recognition is to be employed for their specific educational and broader policy goals.

### **Growing Use of Portfolio Methods to Identify Learning Outcomes and to Document the Proof of These Outcomes**

The main purpose of the continuing education passport is for holders to be able to demonstrate clearly what they can actually achieve. This is established through three stages. First, it is done by systematically collating all formal certificates; second, through writing down and thinking about what skills holders have learned; and third, by looking ahead and thinking about where the learner wants to take his or her learning. The Nordic states, particularly Denmark (My Competence Folder) and Norway (Competence Proof), have developed portfolios in the evaluation of prior learning (Anderson and Aagaad, 2012; Christensen, 2012). The Republic of Korea is considering the professionalising of portfolios and CVs for informal or non-formal learning (Baik, 2012).

### **RVA Systems are Increasingly Being Introduced Alongside Credit Processes and Credit Transfers that Serve as a Measure of Assessing Non-Formal and Informal Learning**

Developing a system where individuals can transfer credit adds flexibility to the learning process for individuals, allowing them to enter and leave education

and training programmes without penalty and to build towards a qualification over time (Baik, 2012; Keller, 2012). Credit transfer systems are becoming increasingly the focus of competence-based recognition reforms and have proven helpful to those countries that have instituted them.

*Usually the assessment process used for RVA provides lots of additional support for candidates' application.* Information to key players is important. In several countries a professional guider and counsellors are identified and trainer to promote RVA and support candidates. In France RVA guidance and counselling was increased which led to the birth of a new profession, the RVA advisor. Mauritius emphasises that information should take into account the complexities of the language that often impede fair validation. Mauritius will use Creole to facilitate the process of RVA (Allgoo 2012).

### **During the Implementation Processes**

During the implementation processes due attention should be paid to the provision of individual support to identify skills. Implementation of RVA should not be a cumbersome process (Keller 2012); sufficient time should be allowed; and collection of evidence should not only be documented or declarative, but also real and simulated (Allgoo 2012; Paulet 2012). The process of matching skills with competences described in training documentation should not be off putting for those who have had limited interaction with formal education resulting in a lack of confidence. This is evident when applicants are unable to match their skills with competencies described in the training documentation (Keller 2012).

### **Planning and Development Of Rva**

In an attempt to overcome some of the identified problems in implementing RVA, countries have recommended general requirements connected with *planning and development of RVA* processes in general. In Mauritius before RVA is extended to all sectors it plans to train RVA facilitators and assessors in all sectors. The identification of such facilitators and assessors is a real challenge. Besides, RVA facilitators and assessors are currently being considered as part-time jobs in all sectors. Austria recommends the provision of counselling and guidance; financial support for institutions and/or individuals; regional and temporal accessibility of the mechanisms; the adoption of a modular approach and; the recognition of partial certifications (UIL 2011).

### **Developing an RVA System (Quality Assurance Policies, Procedures, Standards, Assessment and Evaluation Instruments and Techniques)**

Quality assurance policies, procedures and processes are vital for the trust among users. In Scotland, such concerns span the accountability and fairness

of RVA decisions (appeal and review; the awarding of specific credit within programmes; the level and type of support and guidance provided to RVA; fees charged for the processes; and monitoring practices at school/faculty, department and programme levels). While Scotland maintains the importance of institutional autonomy, it promotes the view that core principles within which RVA provision will operate should provide a more transparent and equitable process, and facilitate mutual trust and confidence between receiving institutions. The use of SCQF guidelines by institutions in Scotland is proving to be a source of guidance and the attainment of greater consistency and transparency (**Whitaker, 2011**). For Germany trust in the quality of qualifications acquired informally and non-formally are central aspects in the discussions and debates on RVA. Norway calls for the development of agreed standards of what the validation is to be measured up against (UIL 2011).

The future plans of the United States is to create the national competency-based framework for the US postsecondary education that will include certificate level-workforce education and training. The purpose is to accelerate the quality assurance, articulation, and other policies, programmes, and practices that will ensure that credits acquired by currently non-credit bearing workforce education and training achieved in part or full through RVA are of the same quality and have the same standing as qualifications achieved as a consequence of formal education and training (Ganzglass et al. 2011).

For countries that have yet to establish RVA, these conclusions will not be an easy or quick process to develop, and more importantly, to effectively implement. There is some limited knowledge of RVA as a term in many countries and of its potential but limited understanding of what it is in practice. However, many of these countries are in the middle of change that will lead to a competence-based and learning outcomes-based system governing the operation of its educational and training sector, and this transformation will prove the opportunity to establish an acceptance of an RVA process. In the longer term, many of these countries should consider RVA not only in its TVET reform programme but also in its higher education system. However that will raise a multitude of other issues beyond skills development. In the short term, RVA needs to be embedded from the outset in policy, practices and funding and priority areas need to be identified, such as the large non-formal education sector and the large number of skilled people without certification.

### **Impact and Outcomes**

Sufficient data about RVA outcomes to paint an accurate picture of how successful RVA has not been implemented is lacking; nor are there clearly

defined benchmarks regarding how much RVA is considered desirable, and why. For New Zealand there is no separate data on RVA because RVA assessment is part of credit transfer and not separated from traditional assessment. Denmark says it has not systematically done quantitative or qualitative analyses on data, outcomes and impact on RVA. However, to design and provide the best possible framework, incentives and also motivations for RVA, better data on what works is needed (Anderson and Aagaard 2012).

Evidence on take-up from the Ministry of Education for Denmark indicates that the potential for RVA is not fully realised. Factors that limit take-up in the Danish context are the lack of implementation of policies and procedures by providers, and the financial crisis of 2010. There is uneven take-up. Take-up is highest in vocational training. Compared to Denmark, both in terms of the numbers of persons who apply for RVA as well as those who go through the process, has been quite high (Andersen and Aagaard, 2012). The Norway case study shows that a fair number of people use the opportunity to have their skills validated in connection with upper secondary education. The survey also points some significant variations between the different fields of study (Christensen, 2012). In Mauritius thus far, some 50 persons have already acquired either a full qualification or a Record of Learning (Allgoo, 2012).

Figures on the use of RVA outcomes (**OECD, 2005, p. 34f**) from Germany demonstrate that RVA is having an impact. With respect to the external students' examination RVA data indicates that it improved status for individuals and the potential recruitment of executives for companies (BMBF 2008: 21). In 2008, this applied to 7.2 per cent of candidates for the final vocational apprenticeship examination. The number of persons who appeared for the examination increased from 20.700 in 2000 to more than 28.000 in 2009. This demonstrates that Germany makes use RVA outcomes on a large scale. Austria too has reported on uptake, and exemplary data for a number of initiatives and mechanisms (**Brandstetter and Luomi-Messerer 2010**). More than 800 candidates per year acquire the (lower secondary school (Hauptschule)) qualifications in second-chance education; approximately 5.300 persons per year take the, apprenticeship-leave exam Lehrabschlussprüfung (LAP) in second-chance education; approximately 3.800 persons per year are awarded the professional title Ingenieur; approximately 3.000 persons have been issued competence balances at the Tyrol Centre of the Future since 2003, about 2.000 persons have been issued the Competence profile KOMPAZ at the Volkshochschule Linz (Adult Education Centre Linz) (UIL 2011).

Mexico until now has no impact evaluation on *firm productivity or economic and social progress for workers*, but CONOCER is in the process of developing the instruments and mechanisms to evaluate impact, such as building databases of firms, voluntary and educational institutions that certify workers, as well as individual workers (Garcia-Bullé 2012). In the Netherlands, however, it has been shown that financial impact for companies, investing in RVA for their employees has a return on investment at the level of reducing the costs of absence of leave for learning. This cost-reduction is substantial (Duvekot 2012).

In South Africa between 1995 and 2004 the total number of qualifications awarded increased with the highest growth in four-year first degrees, honours degrees and master's degrees. However, take-up is limited by staff and resource shortages, lack of compliance with SAQA requirements, and the fact that implementation plans and projects have been developed in only a few sectors. However the impact could potentially be very big, particularly where a history of discrimination, employability and skills shortage are critical factors (**Samuels et al. 2012**).

### **Use of Portfolio Methods and Other Testing Tools**

In USA research with regard to outcomes and transformational effects with regard to outcomes and impacts, a 2006 CAEL survey (Klein-Collins 2006a and 2006b) reports that 66 per cent of college and university administrators accept portfolio assessments for academic credit. This is an increase from 55 per cent ten years ago. Standardised tests are heavily used as indicators of prior learning. About 616,000 individuals completed the GED in 2006. Thousands of corporate courses and programmes have been assessed for credit recommendations. About 2,900 colleges grant credit or advanced standing for CLEP examinations.

In Germany the portfolio called the ProfilPASS is now used as a means of providing evidence of acquired skills, helping to promote personal educational prospects and to draw public attention to informal learning to a greater extent. Germany also reports that outcomes for the users of the ProfilPASS are positive. Typically, they have a greater appreciation of their own skills and, on this basis, can plan their future in a more self-confident and targeted way, and are motivated to participate in further learning. The Pass is frequently used by people who find themselves in a phase of transition or reorientation such as those who are returning to the workplace or those who are looking to set up their own business, but is also used by migrants looking for a way of coping more effectively with the German labour market. More than 110.000

ProfilPASS packs had been issued until July 2011, including more than 55.000 copies of a special version of the ProfilPASS for young people. The digital e-ProfilPASS available now is complemented through a comprehensive range of advisory services (BMBF and KMK 2008: 37).

### **Evidence Regarding Increasing in Participation of Non-Formal and Continuing Education**

What is notable is the evidence from Germany on the increase in participation of non-formal continuing education. Evidence indicates that non-formal learning rose from 52 per cent in 1994 to 72 per cent in 1997 and was 67 per cent in 2000. Two out of three employees take part in non-formal continuing education and training. The participation level in eastern Germany was somewhat higher than in western Germany (UIL 2011).

With regard to *qualitative improvements*, impact studies from Portugal provide evidence of various impacts of RVA particularly the New Opportunities Initiative (See, Gomes 2012). Impact includes evidence on improvements with regard to basic skills, impact at the level of families, companies, social justice, theoretical and methodological perspectives new advancement in the field of adult education and training risks of development gaps, low competitiveness and effects of the global economic crisis, make it necessary to respond by placing people and their capacities in their due place RVA has enriched pedagogical practices across sectors and is seen as a challenging way to renew lifelong learning in adult education, further education and training and in higher education. It has resulted in new concepts of teaching and learning and supports the concepts of biographical and reflective learning, which can be seen as central to self-esteem of the socially excluded RVA is an excellent way to increase the dialogue with work, voluntary agencies and with individual learners (Gomes 2012).

### **Challenges**

The fact that even in countries with established systems of RVA, the full potential of RVA is not yet exploited means that there are still many challenges to RVA's implementation. The ensuing section looks at these challenges. These may also be regarded as the critical factors conducive to the development and implementation of RVA systems. These challenges exist at the systemic level of the enabling environment; in terms of the interrelationships between the different sectors, raising awareness, transforming the education system, transcending cultural barriers; building capacities of the key actors; challenges facing skills recognition and development in the informal economy; challenges facing non-formal education.

## **The Enabling Environment**

The enabling environment includes RVA policy and legislation, financing issues as well as procedures and rules. Challenges reported by the Netherlands and Norway in the education sector focus on the need for better and more uniform procedures. Local authorities in municipalities and counties, and also higher education institutions, meet the obligations in different ways. South Africa reports that although RVA legislation and policies are in place and there are areas of good practice the key challenge is to implement the RVA on a massive scale

Costs for the individual and for the system in terms of information and guidance, assessors, facilitator's auditors and awarding bodies is another systemic challenge raised by the countries. Mexico has recommended creating a balance between state support and self-financing, although RVA of workforce competences exists outside the main institutional arrangements for education and training. For South Africa, barriers tend to evolve around high cost of assessment and evaluation and the limited number of assessment centres that focus on RVA in spite of the priority given to RVA in the national policy guidelines. In the Mauritius case, funding of RVA has been a major issue. The pilot projects were funded by the National Empowerment Foundation and taking into consideration the low income of prospective RVA candidates, the fees were subsidised. Namibia will soon introduce a national training levy which aims to motivate employers to fund, either directly or indirectly, training and development of their employees.

France has reported on the Joint Fund for Career Security (Funds paritaire de sécurisation des parcours professionnels, FPSPP) as a response to situation of unequal access to lifelong learning and RVA. It is a combined financing by social partners and the state, which is expected to provide training to further 200,000 job seekers and over 500,000 low-skilled employees per year. For France the funding of RVA needs to be seen in relation to broader strategic issues of access, relevance and the state of the economy, rather than only in terms of short term operational issues (Paulet 2012).

## **Interrelationships between the Different Sectors**

Denmark has identified the lack of sustainable relationships between the education sector, working life and labour market, and learning in the NGO and adult learning sector as a key barrier to RVA. This hinders the visibility of learning and validation of learning within and across the different learning sectors. France has indicated the lack of trust of the validation system by employers who may accept or not accept qualification documents issued

through the validation process. Norway has reported that the co-operation between the Labour and Welfare Administration and the county centres responsible for the recognition of learning at upper secondary level is underdeveloped—relatively few unemployed people use the opportunities provided to have their learning validated. Other limitations are those of the different domains in which general and vocational qualifications originate. In the Republic of Korea the Academic credits and the portfolio system are developed without much connection with Korean Qualification Framework (KQF), and the Korean Skill Standards (KSS). Network with the relevant system or government organization such as the Ministry of Labour, and Ministry of Health and Welfare.

Mexico has identified the joint effort and the consensus of relevant and visible leaders comprising employers, workers, educators, and government officials, as the single most important factor for success as the critical factor in the implementation of RVA with regard to workforce development. New Zealand highlights how industry training bodies and registered training organizations and government can work together with learning institutions to promote RVA constructively.

### **Raise Awareness about the Benefits of RVA**

Awareness rising for making the opportunities better known as well as for making a transition from the system level to the user or training provider level is big challenges in Norway and Denmark. In Africa, the experience of Mauritius shows that it is effective to have a focused communication strategy to inform the people in the country about RVA and its benefits, and opportunities, and to expose major stakeholder to international RVA best practice. In some countries adult learning agencies such as VOX in Norway are working in alignment with the Ministry of Education, spreads good arguments for validation pertaining to RVA's potential to making adult's practical competences visible and to show adults that often those adults who may not have completed upper secondary education lack the confidence to see the theoretical knowledge that underlines their practical competences.

### **Transforming the Education System**

There are challenges in the education and training, some relate to what continues to be challenges of facilitating the type of innovative curriculum development which embraces and integrates non-formal and informal learning. In Norway, one limitation is that many education and training providers in the continuing education and training sector have not yet strongly prioritised

to offer RVA. Often there are financial barriers, but also cultural barriers and capacity factors in terms of staff qualifications and competences. In Denmark too it is felt that in some aspects it's difficult to convince particular the training providers that RVA is a good idea. There are also individual barriers. It may be a problem that learners and employees are not well informed about the right to RVA.

In New Zealand and South Africa, the situation is different. Most RVA is undertaken by registered training organisations that fall under the quality assurance framework of their NQF. Here, it is the technical and vocational providers of education and training that have more intensively been involved in RVA, perhaps because it is these institutions that have the most highly developed outcomes-based curricula, and because their courses are mostly aligned to skills development in the workplace, allowing the links between the workplace and what is taught in institutions to be acknowledged.

### **Transcending Cultural Barriers**

Several cultural barriers have been highlighted in the country case studies. In Portugal, misapprehensions about second-rate diploma derive from a lack of confidence on the quality levels of education and training offered by the providers, and also from a popular misconception about the value of informal versus formal learning, training and certification. In Namibia the perception that learning attained through conventional system are superior to those attained through Open and Distance Learning (ODL) settings, workplace experience and general life experience remains a key challenge (Murangi 2012). In Trinidad the major challenges faced by the institutions are getting employers to recognise learning outcomes from non-formal and informal learning as credible. In the Republic of Korea, the society excessively values the academic qualification framework hindering the development of the linkage between the vocational and academic system, and the formal and the non-formal system. In India there is a challenge to link skills frameworks to diplomas and degrees.

### **Building Capacities of The Key Actors**

In developing countries, where RVA still hasn't been developed to its full potential, capacity building of key actors is a big challenge. Policy development; establishment of some coordinated structure; training staff and assessors; developing assessment tools; validating and field testing the assessment tools; registering staff and assessors; setting up an infrastructure; conducting assessment; making recommendations to fill skill gaps.

### **Skills Recognition and Development in the Informal Economy**

The role of the informal sector is in itself a challenge for any national education system but especially in countries where the informal economy is providing jobs for a majority of the people, this challenge is all the more relevant to answer. The potential of implementing RVA in such an informal context is appealing since RVA focusing on specific objectives like empowerment, lifelong learning, employment, employability, social inclusion and fighting poverty can very well be supported by designing RVA systems for the informal economy together with the commitment of such actors, local organisations and professional associations. This can be the case for Burkina Faso where the informal economy acts as the biggest training centre. In India the challenges for skills recognition, especially for its huge informal sector are big (Singh 2011). The Gambia Skills Qualifications Framework led by the National Training Authority has been set up to develop skill standards in fields that are important to the Gambian economy. In addition to agriculture, electricity sectors, skills standards are being developed in the field of Adult and non-formal unit (**Savage-Sidibeh, 2012**).

### **Non-Formal Education**

The challenges facing countries with a well-developed system of non-formal education are in some ways equal to the countries with a strong informal economy. The need to gain economic and social perspectives and lifelong learning for citizens is also apparent, only the approach is more education-steered and not so much demand-steered by economic stakeholders. The Jordanian-formal education programmes and training courses for early school leavers are an indispensable part of education and reforms. However there are still challenges to promoting bridges between non-formal and formal education and to encourage governmental and nongovernmental organisations to take up responsibilities in non-formal education that is recognised by public authorities. In Syria most notable difficulties facing adult education are the non-existence of a cooperation plan between the local communities and governmental authorities on the one hand and the lack of connection between non-formal education and labour market on the other.

For the future, it will be necessary for learning outcomes from non-formal education to be defined in an NQF or formal standards and assessed against learning outcomes. In Mexico, Namibia and South Africa a better alignment of literacy and adult basic education sectors to qualifications can lead to important innovations in linkages and pathways. These can convert learning in non-formal education into real opportunities to access formal qualifications.

Non-formal education and training that is not defined in an NQF but is *standardised through a curriculum with equivalence to formal education* has in several countries made complementary non-formal education a viable route to basic education.

### **Lessons Learned**

Many lessons can be learned regarding the critical factors that are conducive for the development and implementation of RVA

NQFs and other alternative frameworks are a threshold issue in RVA. The establishment of NQFs is increasing rather than decreasing. However, countries still have a long way to go with respect to establishing NQFs with standards and criteria that take into account learning outcomes from non-formal and informal learning. Alongside NQFs, sectoral frameworks are being developed for the time being that are suited to existing social, economic and educational challenges in these countries.

Also worth noting is that NQFs or other benchmarks do not in and of themselves generate RVA. Other conditions are necessary. Intersectoral cooperation resulting in an improved match between the individual education and occupational profile, and the education and training sector, the labour market sector and the voluntary sector is essential for the organisation of RVA. The education and training sector must be receptive, transparent, flexible and demand-led in order to be able to provide tailor-made learning opportunities to the individual according to his needs identified through RVA processes.

Planning will be very important and a relevant authority will need to take responsibility for this role. Such a process should be undertaken in collaboration with other key players such as government, industry, NGOs and social partners to ensure a lifelong learning approach is used.

In sum, the planning process will need to incorporate issues such as:

- ❖ NQFs
- ❖ Advocacy and communication
- ❖ Targeting specific group initially to create social effect
- ❖ Identifying industries where the need is greatest – through industry skills committees
- ❖ Clarifying the initial and ongoing costs and how these will be funded

- ❖ Initial training of assessors and sustainability of this process
- ❖ Putting in place procedures most needed for the registration of training organisations/providers
- ❖ Maintenance of central register of qualifications
- ❖ Audit and moderation functions
- ❖ Portfolio development

Improved possibilities for the active commitment and shared responsibility of all stakeholders in decisions about form and content of national reference points for RVA taken from work-based, education-based non-formal and informal learning can clearly pave the way for supporting a diversity of lifelong learning-'roads' in which RVA has a contribution to make.

While the full potential of RVA has yet to be exploited, studies have shown that it is an important component of policy objectives that would have an impact on lifelong learning, employability, workforce development and social inclusion.

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**The study of perception of academic counsellors towards electronic media assisted distance learning courseware: Some experiences with the academic counsellors of the School of Distance Education, University of Calicut, Kerala**

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**Abstract**

Academic counsellors play a crucial role in distance education system. They are the main link between the institution and the learners. They assist distance learners to remain active and effective in their learning by motivating and empathising with them. The process of constructing knowledge in distance learners is affirmed through the application of electronic media. Thus application of electronic media in distance education, its convenience, effectiveness and accessibility have to be understood by the academic counsellors in the right perspective. Towards this, an unbiased evaluation of application of electronic media courseware by the School of Distance Education, University of Calicut (SDE-UoC), Kerala and the perception of academic counsellors of SDE-UoC towards electronic media assisted distance education have been made. The results showed that the counsellors did not have consensual idea of what learning through electronic media is. One strategy adopted was to sensitize them about the efficacy of teaching-learning transaction through application of electronic media. Media notes were distributed prior to screening of videos used for sensitization. It turned out to be quite a successful exercise though there were apprehensions on the appropriateness of applying technology across the board for all courses.

Findings of the electronic media sensitization sessions have revealed the urgent need to energize the distance teaching community to accept and adopt electronic communication technologies for teaching. The academic counsellors have felt quite strongly that electronic media based teaching is a judicious supplement to the print materials. The paper presents the complete

scheme of the study undertaken and the experiences gathered thereof. It is a reflection of academic counsellors' perception towards electronic media assisted distance teaching.

*Key words:* distance education, sensitization, electronic media, academic counsellor, media note.

## **Background**

The small Indian state of Kerala is located on the Malabar coast in the southwest of India. Its area is about one percent of the total area of the country. Kerala is the only state in India which remains in the 'very high human development index' (Dhar A, 2013). The state has the highest literacy rate in India (CENSUS, 2011). 'Its achievements in the field of adult literacy, education and health care have been hailed by several social scientists' (McKibben, 1998). Some of them termed it as the Kerala Model of Development. Achievements such as low levels of infant mortality and population growth, and high levels of literacy and life expectancy, along with the factors responsible for such achievements have been considered the constituting elements of the Kerala Model. Kerala has one of the best health care systems in India. Some of its developmental strides are comparable to that of developed countries. Kerala is also characterized by high degree of social awareness among its people. A survey conducted in 2005 by Transparency International ranked Kerala as the least corrupt state in India. Kerala is also ranked as India's cleanest state (Quora 2013). The state recently became and is currently the only one to have banking facilities in every village.

Kerala enjoys immense historical advantages in terms of relatively high investments in education. State funding on education is above 30% of GDP and as a result a number of people get opportunities for higher education. Nevertheless, Kerala concentrated resolutely on primary and secondary levels of education and to certain extent overlooked higher education. That is why "It has been pointed out that on higher education, Kerala fell behind several Indian states on several dimensions of access especially on the availability of educational opportunities within the state relative to population and the number of students enrolled in these institutions" (Tilak, 2001).

The four affiliating universities in the state register colleges falling within its geographical jurisdiction:

- ◆ University of Kerala (affiliates colleges in three southern districts of Thiruvananthapuram, Kollam and Alappuzha)

The study of perception of academic counsellors .....

- ◆ Mahatma Gandhi University (affiliates colleges in south eastern districts of Pathanamthitta, Kottayam and Idukki)
- ◆ University of Calicut (affiliates colleges in the south Malabar districts - Thrissur, Palakkad, Malappuram, Kozhikode and Wayanad) and
- ◆ Kannur University (affiliates colleges in the north Malabar districts- Kannur and Kasargod)

The colleges in Kerala may be categorized generally into three groups.

- ◆ Government colleges (15% apx) which are fully funded and governed by the state government
- ◆ Private aided colleges (40% apx) which are mostly run by religious groups which get public funding towards the payment of teachers' salaries as well as developmental activities.
- ◆ Self-financing colleges (45% apx) are private unaided colleges.

There are the Parallel Colleges to meet the additional demands of higher education. The parallel colleges are unregistered, below-average educational institutions which give students an opportunity to register privately to the universities for appearing at their degree awarding examinations. Two years back the University of Calicut decided to dispense with the scheme of private registration and advised prospective students, who are not on the rolls of regular approved colleges - Government, Private aided and Self-financing colleges - to seek admission through its School of Distance Education.

One of the most important phases in the liberalization policy of higher education in Kerala was the establishment of correspondence education institutes in the conventional universities, in the University of Kerala in 1977, followed by the University of Calicut in 1981 and the Mahatma Gandhi University in 1989. Of late, the Kannur University was carved out of Calicut University and it established a Distance Education Department in 1982. IGNOU, the national open university has been in operation in the state since 1988. Besides these, distance education institutions and departments of several other universities from outside the state, mainly from neighbouring Tamil Nadu, are operating in Kerala.

### **Factors favouring development of electronic media enabled distance education in Kerala**

There are many favourable factors that can augment the growth of technology assisted distance education in the state. All its villages are electrified. "Kerala

tops the country in terms of households having both landline and mobile phones with 31.3 percent having twin connectivity compared to the country average of six percent. Among all states in India, Kerala has the highest penetration of computers and Internet. Desktop and laptop computer penetration in households with internet connection, the State's average of 6.3 percent is more than double the national average of 3.1 percent of the total households. Kerala's total desktop or laptop penetration without internet connection of 15.8 percent of the total households is much more than the national average of 9.5 percent" (Praveen, 2012). In 2007, with the objective of making at least one member of the family connected to the Internet, the Government of Kerala launched broadband internet scheme for all schools in the state.

There are some very successful electronic media assisted projects initiated in the state. The *KissanKerala Project* has been developed to support the farming community by providing right information at the right time by using Information and Communication Technology (ICT) systems and tools so as to enhance agricultural production and marketing opportunities. Another ICT enabled initiative undertaken in the state is the *Akshaya Project*, with which the state hopes to become the first e-literate state in India. Kerala is one of the first states of India to initiate free and compulsory computer education in high schools through its *IT@School Project* that covers 1.6 million students every year. While Higher Education Council of Kerala recognises the importance of ICT, this need has not been addressed in practice. The facts above are testimony to the feature that the environment is very conducive for technology driven distance education to become a success in the state.

The origin and the steady growth of distance education has been relatively easy throughout the world among populations whose health, education, economic resources and other such developmental indices are first rate. Lately, factors like quest for greater social development, migration of educated youth from Kerala to different parts of the world especially to the Arabian countries, the lack of employment opportunities within the state, social status attached to university degrees have pushed the demand for higher education enormously among people of the state. In general, the atmosphere in Kerala is most favorable for the growth of electronic media assisted distance education.

### **The Present Study**

Information technology has profoundly changed the teaching learning process. The education community recognises the positive implications associated

with using technologies for distance education. These include access to a great variety of learning resources, greater flexibility and control over one's study, improved opportunities for individualized learning, and the cost effectiveness involved. A digitally literate teacher now requires transforming into a digitally fluent teacher. This is true to the Indian distance education setting as well but may be with a modification in the synthesis and measure of traditional teaching methods and technologies. How far do the academic counsellors affiliated to one of the conventional universities perceive technology advancement in distance education? For this study, we chose the University of Calicut as it is the largest residential cum affiliating university in Kerala.

**Objectives:**

- To assess electronic media application by SDE-UoC
- To study the perception of academic counsellors of SDE-UoC towards electronic media assisted distance education
- To sensitize a group of academic counsellors to electronic media assisted distance education

**The University of Calicut, Kerala**

The University of Calicut (UoC) is one of the seven universities in Kerala. Established in 1968, it is the largest university in Kerala. With around 200 affiliated colleges under it, spread across the five northern districts of Kerala—Kozhikode, Malappuram, Palakkad, Thrissur and Wayanad, the UoC conducts courses and examinations for around three lakh students every year. The UoC had to meet the increasing demand for higher education and the challenges of restricted student intake capacity of the formal classrooms in its affiliated colleges. One of the options was to permit students to appear at the UoC degree examinations as private (external) candidates. Under this system, the students who could not seek admission in the affiliated colleges could register as external or private candidates at the UoC, if they fulfil the prescribed entry qualifications. On completion of the period of course (three years for graduation and two years for master's degree) such privately registered candidates could appear at the UoC examinations for certification. The syllabus for external students is the same as the one prescribed for regular students. Under the external system, students study on their own and the university takes no responsibility for teaching them. As there was neither pedagogical support nor guidance from the university, the privately registered students were at the mercy of a large network of sub-standard tutorial institutions, ubiquitously called as *parallel colleges*. The second

alternative for those seeking higher education was to take direct admission at the School of Distance Education, University of Calicut (SDE-UoC).

In 2011, the University of Calicut has scrapped its private registration scheme and brought all students, who do not get admission to the affiliated colleges, under choice based credit and semester systems and attached them to the School of Distance Education (SDE) functioning under the university.

### **The School of Distance Education, University of Calicut**

Established in 1981, the School of Distance Education, University of Calicut (SDE-UoC) has emerged as a major distance education provider in Kerala. Annually about 30,000 students enrol for various programmes of SDE available under two streams – Regular and Open. Regular Stream courses are meant for those who wish to pursue their studies through distance education mode provided they satisfy the same conditions prescribed for admission to the graduate and postgraduate programmes offered in colleges affiliated to the University. Open stream courses are tailored to meet the educational needs of those who have not acquired the basic qualification needed for admission to regular distance education courses. All those who attain the age of 18 years are eligible to seek admission through an entrance examination to open stream courses.

Currently, the SDE offers 18 graduate, 15 postgraduate and 2 diploma courses. The academic courses offered range from three years' Bachelor's degree in languages like Malayalam, English, Hindi, Sanskrit, Tamil and Arabic and subjects like History, Economics, Sociology, Commerce, Business Administration, Mathematics, Psychology and Philosophy. Besides these, two years' Master's degree courses are offered in all languages mentioned above and in subjects like Commerce, Economics, Sociology, History, Political Science, Philosophy and Mathematics. There is also a one year Bachelor's degree course in Library and Information Sciences. All students are expected to attend contact classes arranged at the study/counselling centres. Some of the affiliated colleges of the university function as study centres and programme centres for the distance education courses. The SDE has approved 18 educational institutions in different states of India to enrol students for various courses offered. In addition, the SDE has six approved overseas centres at Sharjah, Abu Dhabi, Doha, Kuwait and Bahrain. Printed study materials are provided to all the students of SDE.

### **Review of literature**

For several years, printed study notes sent by post by distance education institutions have been the primary method of teaching distance learners in

India. With scientific advances, alternative technologies have come into existence for communication. “Electronic resources have been rapidly adopted in academic spheres” (Adegbore, 2011). It is as well realised that technology integration into education is no longer a choice but a compulsion of the times.

“India ventured into distance education in the early 1960s” (Sharma, 2005). Since then access to distance education has grown phenomenally with a large number of institutions offering distance learning programmes. However, application of electronic media in distance teaching in the universities in India is in miniscule and it varies from one institution to another. The main reason behind this is that the conventional universities offering distance-learning programmes do not have a separate curriculum and for their distance education wing.

There are some exceptions like the Indira Gandhi National Open University (IGNOU), which is supplementing its courseware with a few audio and video programmes in compact disc form. Some of the audio-video programmes are broadcast through dedicated *Gyanvani* educational FM radio stations and *Gyandarshan* educational television channels. In addition, a few hours of live interactive radio and television conferencing are also arranged. What interests us is how far the distance education practitioners including the students and the academic counsellors are using the available technology. Some studies on this aspect have been conducted. In general, the picture is very grim. The compact discs produced by IGNOU are only supplementary in nature, not essential to the learners to complete the study successfully as the core curriculum is covered within the printed self-learning materials. Moreover, the audio and video discs are not provided to the learners for their individual use at their personal time and space. They are made available at designated study centres, sometimes at far off locations. Besides these are the inaccessibility or unavailability of basic infrastructure like uninterrupted power supply, telephones, computers etc. The technology barrier can extend to even non-availability of signals to listen to radio or view television. “All these are matters of concern for a national University like IGNOU” (Pillai, 2008).

Besides IGNOU, some State Open Universities, a few science and technology institutions and private universities offer some of their distance education programmes supplemented with electronic media components, besides printed study materials. Some institutions and their programmes tend to focus on technology, overlooking staff development for effective use of technology. Technophobes among academic counsellors who are uncomfortable with devices like compact discs and computers consciously avoid new technology.

The country has a long way to go before being able to provide equitable access to electronic media integrated distance education and online education. India is an instructive illustration of how the absence of a coherent policy for the integration of technologies in education results in failure to serve the cause of education despite many advances the country has registered in ICT. "India has made remarkable progress in education and in ICT; yet it has not done much in integrating technologies in its education system. The country has the infrastructure; it has a dedicated education satellite with multiple channels; an education channel regularly aired on its national television network, an ever expanding telecommunication network and most certainly the trained human capital that can harness all these components to enhance the quality and reach of its education provision to very large sections of its population" (Kanwar, 2007).

"Distance education institutions are supposed to provide effective support service in the form of self-learning study materials, contact/counselling sessions, multimedia instructions, response/feedback mechanism, etc. to students" (Krishnan, 2004). A study was conducted by Raji and Godsy (2010) among 200 students from five districts of Kerala to understand how undergraduate students in arts and science colleges relate to new ICTs especially the Internet. Results show that many colleges do not provide free Internet access to students. The study suggests the need to create a teaching and learning environment in colleges that utilises the opportunities thrown open by the World Wide Web, to equip students and teachers in its use and to ensure that students have an enabling access to ICTs within their campus.

### **Method**

A general questionnaire was used for collection of data from the academic counsellors of various study centres under the SDE-UoC. This provided valuable information on how much the academic community has been involved in electronic media assisted distance teaching and how they perceive electronic media-assisted distance teaching.

Teachers should not solely rely only on chalk and talk method and allow students to assume a passive role in learning. They have a significant role to play in the classroom when a curriculum based video is being played. With the electronic media-aided learning material, teachers need to alter traditional methods of teaching and engage students in two-way communication. If the teacher thinks his/her task is completed by playing the film, he is insensitive. Prior to the media session, the teacher needs to talk about the programme to be screened. For this, the teacher must have viewed the film many a time.

Towards performing the sensitization exercise, the researchers used video compact discs produced by the Electronic Media Production Centre of the national open university, IGNOU. Media notes containing a brief introduction to the film, mentioning its objectives and posing certain questions upon the film to answer were distributed prior to screening. Several media notes were prepared based on the films selected for presentation.

### **A profile of academic counsellors :**

We did a profiling of counsellors who participated in the study. It showed that:

- The academic counsellors of various courses under the SDE-UoC are regular full time teachers of the affiliated colleges of the University.
- They hold Master's degree in their discipline and or higher diplomas in teaching and some of them have doctoral degrees too.
- Young teachers have successfully cleared the National Eligibility Test of the University Grants Commission of India, making them eligible to teach in higher education institutions.
- None of them have been trained specially to counsel in the distance education system or possess a professional degree or diploma in teaching or counselling scientifically through distance mode.

We learned that it is during their off time and during holidays and vacation that the counsellors conduct 'contact classes' for the distance learners at the designated Study Centres. Another aspect that we looked into was the extent of exposure the respondents had towards computers and the Internet. Of those who took part in the study none had any formal training in computers arranged by their college/university. Most of them admitted to the fact that use of internet is very restricted in the college. Hundred odd teachers in a college have a couple of computers placed in each department. However, most of them claimed availing of internet resources through their home computers. Most of them have e-mail addresses; however, very few open them regularly. None of them considers on-campus internet facility/Wi-Fi a priority.

### **Findings 1: The status of application of electronic media in SDE-UoC.**

The answers to the questionnaires have provided the required information for the study. It has been learned that the UoC depends fully on printed study materials for teaching distance learners. The printed study materials are more or less like study guides, not illuminating, enlightening, inspiring or appealing.

The study materials are not teacher-inbuilt. This is quite a sensational outcome and requires lot of interpretation by the curriculum designers, course writers, etc.

The Distance Education Council (DEC), the apex body in India responsible for promotion and coordination of distance education system, and for the determination of its standards have provided guidelines on preparation of study materials meant for distance learners. These shall be in the self-instructional format, which in structure differ from a chapter of a textbook or an article of a journal. Distance learning material shall be self-explanatory, self-contained, self-directed, self-motivating, self-evaluating and self-learning. DEC demands that printed self-learning materials must be supported by Audio-video material.

Electronic media is not put in use by the SDE-UoC. There are no supplementary or complementary audio, video or computer aided multimedia aids ever made. The distance learners are fully dependent on the printed study aids provided by the SDE-UoC. Moreover, for certain programmes like Bachelor in Hindi, Sanskrit, Tamil, Master's degree in Philosophy, Sanskrit etc. printed study aids are also not provided.

Here we have a clear understanding of the impediments to the philosophy of distance education. The same curriculum meant for the regular classroom learners is adopted for distance learners by the UoC. Here we see that the curriculum itself is an impediment to distance learning. It is as well discriminatory in its approach to distance learners with no motivational factors embedded or strategies adopted to ensure quality in printed study materials supplied. A general analysis of the collected responses shows that there are barriers like the counsellors' comfort level with technology. Some of the respondents are mildly technophobic. Some have low level of psychological readiness. Their double standard is perceptible when they are willing to operate a mobile smart phone but not an educational apparatus. Their responses to our questionnaire do not clearly specify whether they accept or reject electronic media assisted teaching. Interviews were held with counsellors to elicit their views on electronic media enhanced distance learning. Some of them have adequate knowledge and are willing to use compact discs and other devices during counselling sessions if they are provided with such tools. The fact is that the SDE-UoC does not use electronic media for distance teaching and that all distance education courses offered are not even supplemented with printed study aids has inevitably affected the quality of learning at the SDE-UoC. Here, the educational apparatus has been impoverished.

## **Findings 2: Sensitization of academic counsellors attached to the SDE-UoC**

Media based counselling has enormous significance in distance education. It facilitates in presenting information, guiding the learner, practising and assessing learning. To affirm all of these or some of these points and to draw steps to sensitize distance education counsellors on electronic media in distance education and to raise demands for incorporating new media and technology aids into distance teaching, the researchers identified counsellors belonging to some of the largest study centres of SDE-UoC. Some of these counsellors were also involved in the preparation of printed study materials for SDE.

<b><i>Study Centre under SDE-UoC</i></b>	<b><i>Number of media notes Used</i></b>
St. Thomas College, Thrissur	26
Sree Kerala Varma College, Thrissur	22
University College, Tenhippalam, Kozhikode	25

Care was taken to ensure that the prescribed syllabus of the UoC closely corresponded with that of the video discs used for sensitization. Media notes on the selected films were distributed among the counsellors prior to screening them. This was done with the understanding that the media note can provide viewers basic information on the film they are going to watch. It helps in assimilating the content more skilfully. The media notes can highlight particularly useful areas or can identify specific visuals or audio bits requiring emphasis. It can also arrest the viewers' attention to the film until the end. It is as well an easy method to receive objective feedback on the educational media used and can identify strengths, weaknesses, and areas for improvements.

### **Videos used for sensitizing academic counsellors**

- Video 1- *Thomas Hardy: A Profile*. Objective: To introduce Thomas Hardy and his works to distance learners of English. In a 1980 survey conducted in the UK, Hardy emerged as the general favourite. The video transports students through the historical period of Hardy, an act unthinkable in a normal counselling session.
- Video 2 - *Eminent Indian English Writers: Kamala Das*. Objective: To familiarise distance learners to Indian writing in English through one of

the bold and brave woman writers who defied convictions and had the courage to fearlessly stand up for what she believed in. Through this film the distance learners get an opportunity to have a virtual tour of the ponds and the fields that inspired Kamala Das to pen down some of the most beautiful poetry in English.

- Video 3- *Translating Tagore*. Objective: To introduce distance learners to the nuances of translation. This video programme perhaps is a great departure from the discipline of every counsellor we interacted with. The programme explains the intricacies involved in translation of a text. In a subtle way, the programme provided training in logical approach towards handling issues related to problem solving.
- Video 4- *The Making of a Sociologist: Social Stratification in India*. Objective: To provide an opportunity to the distance learners of sociology to listen to a great Indian sociologist expressing his views on social stratification. This presentation emphasised the fact that recorded video provides opportunity for distance learners to listen to stalwarts in their field of study-here Prof Andre Beteille.
- Video 5- *In Search of History*. Objective: To imbibe in students of history the significance of unbiased record keeping for history writing. Electronic media can do great justice to students of history. The film focusses on the role of historians in unbiased record keeping.
- Video 6- *Final Accounts from Incomplete Records*. Objective: To acquaint commerce students with various kinds of accounts keeping methods through a self-learning video course material. This video provides practical knowledge to distance learners in record keeping through a small film built within, a scenario which cannot be explained during personal contact programmes arranged in a classroom. The video is a true self-learning course material.

Reproduced below is a Media Note distributed among academic counsellors prior to the screening of the video, *Translating Tagore*.

***Media Note: Translating Tagore***

*Introduction:* This film is about 27 minutes duration. The works of Nobel laureate Rabindranath Tagore are rich in thought. Translating them evokes great interest. Prof Kanwar is in conversation with Dr William Radice, the poet, the first Britisher to have a doctorate in Bengali from a British University.

*Objective:* Media based counselling has enormous significance in distance education. It facilitates effective learning transaction, therefore, the need to sensitize distance education practitioners to electronic media.

1. From which Bengali book did Dr William Radice first make a translation into English? (Toon Tunir Boi / Thakumar Jhuli / Rabindranather Choto Galpo) (“ your choice)
2. How does Radice describe a literary translation? It is slow and ..... task.
3. What literary award was given to Dr Radice by Bengal? .....
4. With what does Dr Radice compare the first draft of a translation?.....
5. Mention a word in Bengali which Dr Radice found untranslatable? .....
6. Please suggest another title to this film .....
7. How do you rate this e-learning material? Very good/Good/Fair/Poor/Very poor (“your choice)
8. Your suggestions/comments.....  
Name:.....  
E-mail/PhoneNo:.....Discipline.....

We received feedback on the media notes and studied them. The results were overwhelming. From the analysis of the responses it is evident that to some extent the academic counsellors have realised the benefits of media assisted distance teaching. ‘*Translating Tagore*’ and ‘*The Making of a Sociologist: Social Stratification in India*’ evoked good response. Some of them were of the opinion that the video films required updating. Indeed the videos used were earlier productions of IGNOU which had not been revised.

After screening, discussions were held on the content and presentation of the film. It was emphasised that the teacher requires seeing the film a number of times before it was presented to the learners so that he/she is able to pitch the media precisely to the audience profile. The counsellors were more or less compelled to view the film as they had to jot down answers to a few questions raised in the media note. For most of them the media sensitization was a first time experience. A counsellor using media notes in the classroom should also be able to develop media notes for his/her future use. With this in mind, another sensitization exercise was conducted by entrusting the academic counsellors to prepare media notes on select educational video film after

watching them. Films, 'Views on Reporting: An Interview with Mark Tully' and 'Writing for Children' were chosen.

### **Perception of academic counsellors**

The counsellors' feedback received through the media note and opinions provided by them on the questionnaire gave us valuable inputs. The outcome of the sensitization exercise has been very encouraging. The marked difference felt on completion of the media sensitization exercises was the observation that academic excellence can be achieved in distance teaching with the backing of electronic media. An academic counsellor engaged in distance teaching should be interested in the promise of electronic media assisted learning. It is not always the case. "A media literate academic counsellor in distance education would be one who can identify the persuasion devices used in the electronic media" (The International Encyclopaedia of Curriculum, 1991). Lacking this ability is an impediment. Young lecturers at the St.Thomas College have been very proactive and have been using at times educational videos available through Open Educational Resources (OER). But they lamented that what they get do not often go with the curriculum requirement of the SDE-UoC. They are of the opinion that SDE-UoC began incorporating electronic media assisted devices for teaching distance learners before it is too late.

"Electronic media has always fascinated educationists because it has the power to communicate difficult concepts in simple ways. In the case of distance learning, which depends on self-learning materials, the use of multimedia enriches the teaching-learning experiences by providing a multi-sensory perspective" (Reddy & Mishra, 2003). Besides having a sound pedagogical base, the electronic media programme design involves some understanding of the basic concept of electronic media and issues involved in the development of educational multimedia. A film on Elizabethan drama meant for distance learners of language and literature may include snapshots of stage as the term 'stage' describes the entire scenic apparatus of the theatre. The Shakespearean stage included the outer stage projecting into a circular area. Above it was a thatched roof and hangings but no side or front curtains. In the floor were trap doors through which ghosts and others ascended or descended. Such intricate descriptions, indispensable for better understanding of a Shakespeare play, can be provided through electronic media. Visuals or simulations of a nuclear reactor becoming critical cannot be brought alive in the classroom, whereas it can be virtually shown through electronic media. In all cases, the distance learner experiences each sequence in a vicarious manner and draws the pedagogical value contained in them.

A distance education counsellor may also be an audio or video courseware developer. It begins with script writing. What one is unable to bring in the printed self-learning material may be sourced in the form of an audio or video script. The unit or a course component already in the printed form can also be enriched with audio/video inputs for better learning transaction to take place. "The combination of visuals with words has the effect of improving learning" (Mayer, 2003). The essence of good audio or video production is teamwork. While working on the script, one could visualize the visual and aural inputs, camera shots, movements and effects. Electronic information sources available in front of the academic community now compel the counsellors in distance education system to play a multi-dimensional role.

### **Conclusion**

This study sought to understand the perception of academic counsellors of the School of Distance Education, University of Calicut toward use of electronic media in distance education. Their conceptual thinking on the matter has been analysed through a course of media sensitization exercises.

The background to the study analyses the prevailing academic atmosphere and the available technological ambience for the development of electronic media assisted distance education in Kerala. Many successful e-learning projects are being undertaken by governmental agencies in the state. However, when it comes to university education through distance mode the picture is grim. Academic counsellors of the SDE-UoC are not akin to the use of technology for pedagogical gain.

Exercises have been undertaken by the researchers to sensitize the distance education counsellors on the benefits of application of new media in distance education. The counsellors require transforming their teaching from teacher-centered approach to learner-centered approach. Additionally, every teacher should be able to integrate ICTs in their instructional mode. The results of this study, based on the responses of the academic counsellors indicate their unchanging teaching approach due to the perceived methodology of the distance education provider. The use of electronic media and tools is central to distance teaching and learning strategies. However, there is reluctance in adoption of new technology by the distance education provider. Late than never, electronic media has to be acknowledged by institutions offering distance education programmes. The SDE -UoC has indeed a long way to go, but given the opportunity, we hope that the teachers will catch up with the nuances of electronic media based teaching as they have their great strength of motivation.

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## **Introduction of Credit System in School Curriculum: An NIOS Perspective**

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### **Abstract**

In recent years the credit system is being increasingly used to describe educational programmes in India and abroad. As part of educational reforms in India the University Grants Commission (UGC) has suggested that 'choice-based credit system' should be implemented at undergraduate and higher levels in educational institutions. It is worth mentioning that the credit system has been prevalent in India for many years in premier educational institutions such as IITs and IGNOU. In recent years certain universities have switched over from conventional marking system to credit system (for example, University of Madras, University of Mumbai, Shivaji University, universities in Gujarat, among others) while discussion on such a transition is going on in many others. Notwithstanding the fact that credit system is being followed in some of the institutions of higher learning in India, the conventional pattern of fixed subjects and marking scheme continues to be followed at the School level<sup>1</sup>.

Against this backdrop the paper looks into the possibilities of conversion to a credit system in NIOS for its educational programmes in general and vocational certificates and diplomas in particular. For this purpose it takes into account the existing programme structure of NIOS and suggests corrective policy measures. The paper provides a brief overview of the existing models of credit system in NIOS.

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<sup>1</sup> Credit system is being followed at the school level in some of the countries. In the US certain schools follow a credit system to advance from one grade to another. See for example website of Windsor Middle School, USA at [http://wms.weldre4.k12.co.us/modules/cms\\_pages.phtml?pageid=58073](http://wms.weldre4.k12.co.us/modules/cms_pages.phtml?pageid=58073) (accessed on May 27, 2012). In Indonesia some of the schools have adopted credit system (see Jakarta Post, September 21, 2010) where students have to complete 116 credits at school level.

**Key Words: Credit system, ODL, assessment**

### **Introduction**

Credit system is a systematic way of describing an educational programme by attaching credits to its components. The definition of credits in higher education systems may be based on different parameters, such as student workload, learning outcomes and contact hours. A credit framework is a set of specifications for valuing, measuring, describing and comparing learning outcome. Simply stated it provides a standardised means of representing learning outcome, enabling comparison of learning required in different educational programmes and qualifications and thus facilitating the building up of credit by learners and/or the transfer of achieved learning between programmes and/or between institutions.

In recent years the credit system is being increasingly used to describe educational programmes in India and abroad. As part of educational reforms in India the University Grants Commission (UGC) has suggested that 'choice-based credit system' should be implemented at undergraduate and higher levels in educational institutions. It is worth mentioning that the credit system has been prevalent in India for many years in premier educational institutions such as IITs and IGNOU. In recent years certain universities have switched over from conventional marking system to credit system (for example, University of Madras, University of Mumbai, Shivaji University, universities in Gujarat, among others) while discussion on such a transition is going on in many others. Notwithstanding the fact that credit system is being followed in some of the institutions of higher learning in India, the conventional pattern of fixed subjects and marking scheme continues to be followed at the School level<sup>2</sup>.

Against this backdrop the paper looks into the possibilities of conversion to a credit system in NIOS for its educational programmes in general and vocational certificates and diplomas in particular. For this purpose it takes into account the existing programme structure of NIOS and suggests corrective policy measures. The paper has been organized as follows: Section 2 below provides a brief overview of the existing models of credit system being practised in India. Section 3 gives a profile of the existing structure of educational

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<sup>2</sup> Credit system is being followed at the school level in some of the countries. In the US certain schools follow a credit system to advance from one grade to another. See for example website of Windsor Middle School, USA at <http://wms.weldre4.k12.co.us/modules/cms/pages.phtml?pageid=58073> (accessed on May 27, 2012). In Indonesia some of the schools have adopted credit system (see Jakarta Post, September 21, 2010) where students have to complete 116 credits at school level.

programmes offered by NIOS, focusing mostly on the wide variation in student workload and evaluation pattern across programmes. Section 4 makes a case in support of introduction of credit system in NIOS while Section 5 presents suggested guidelines for possible changes. Section 6 gives a brief summary and brings out major conclusions of the paper.

### **Existing Models of Credit System**

As pointed out earlier, a few of the academic institutions in India follow the credit system. In Indira Gandhi National Open University (IGNOU), for example, a certificate programme is worth 12 to 16 credits while a diploma programme is of 32 to 36 credits. If a course is of 8 credits, then a certificate programme requires two courses and a diploma programme requires 4 courses. Weightage for assignment and final examination are given in percentage terms (for example 30:70 or 50:50). Examination for each paper is of either 50 marks (2 hours duration) or 100 marks (three hours duration). Marks scored in assignment and final examination are appropriately weighted and combined<sup>3</sup>. Thus there is a uniform structure across programmes. Again, the print material for each course is designed keeping student workload in view such that a credit implies 25-30 hours of study by the student.

There is more or less agreement in the academic fraternity that a credit may be equivalent to 25 to 30 study hours by students, which includes time devoted towards classroom teaching, self study, and doing homework/assignments (IGNOU). In the traditional framework one credit means one lecture per week in a semester system (IITs, Mysore University). NIOS being a distance education institution, students have to devote a substantial time towards self study. Thus the former criterion of 25-30 hours per credit appears to be appropriate for NIOS educational programmes.

### **Profile of NIOS Educational Programmes**

The NIOS was set up by the Ministry of Human Resource Development, Government of India as an autonomous organisation in 1989 with an objective of providing relevant continuing education at school stage, up to the pre-degree level through ODL mode. In addition to general education at secondary and senior secondary levels it offers vocational education in seven broad areas, viz., Agriculture, Engineering & Technology, Health & Paramedical, Home Science & Hospitality Management, Computer & Information Technology, Business & Commerce, and Teacher Training. In the vocational

<sup>3</sup> For example for a 100 marks subject (with assignment: final exam = 30:70), assignment question paper is set for 100 marks and final examination is set for another 100 marks. If the student scores 60 in assignment and 80 in final examination, then his total score is 74 (= 30 per cent of 60 and 70 per cent of 80).

stream the NIOS offers 80 vocational courses in the form of certificates and diplomas.

The educational programmes offered by NIOS combine theory and practicals as per requirement of the subjects concerned. The weightage assigned to these courses and their components are in terms of marks. These marks are usually indexed to the evaluation system adopted for a course (for example, 60 marks theory and 40 marks practicals in the public examination).

### **Outline of Existing Courses**

The NIOS at present offers educational programmes at Secondary and Senior Secondary levels apart from certificates and diplomas in vocational fields up to pre-degree level. The Secondary and Senior Secondary programmes offered by NIOS are at par with that of Education Boards of other states and CBSE. At the Secondary level a student is required to opt for a minimum of five subjects (maximum of seven subjects) from a list of 37 subjects<sup>4</sup> (details given at Appendix-I). Each paper at the Secondary level has maximum marks of 100 and the duration of examination is 3 hours. For subjects having practical component certain weightage is given to practical examination. There are minor variations in the weightage assigned to practical component across subjects. At the Senior Secondary level a student is required to opt for a minimum of five subjects (maximum of seven subjects) from a list of 21 subjects<sup>5</sup> (see Appendix-I for details). For each paper at Senior Secondary level the maximum marks is 100 and the duration of examination is 3 hours. For subjects having practical component certain weightage is given to practical examination. Here also there are minor differences among subjects regarding weightage given to practical component. At both Senior Secondary levels the minimum and maximum duration for completion of the programmes are two and five years respectively<sup>6</sup>.

There are 80 vocational courses offered by NIOS at present. Some of these courses (10 at Secondary level and 20 at senior Secondary levels, see Appendix-I for details) are offered in combination with academic subjects.

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<sup>4</sup> The list includes 17 languages, 10 academic subjects and 10 vocational subjects. A student is required to take one or two languages and the remaining from academic subjects. The student has the choice of taking one vocational subject (not compulsory). A student can opt up to seven subjects depending upon the requirement in his/her state of domicile.

<sup>5</sup> The list includes 4 languages, 17 academic subjects and 20 vocational subjects. The student is required to take one or two languages. There is an option of taking one vocational subject (not compulsory). A student can opt up to seven subjects depending upon the requirement in his/her state of domicile.

<sup>6</sup> Students who have completed some of the courses in another education board get relaxation in minimum time requirement.

Some of the courses offered by vocational department are combined to form various diplomas and certificates. At present there are 3 Diploma programmes and 77 Certificate programmes offered by Vocational Department of NIOS.

### **Limitations of the Existing Structure**

The existing model of fixed subjects with marking scheme, though very old and still in practice, has certain limitations. Some of the limitations in the context of vocational courses are outlined below. First, the relationship between efforts put in by a student (in terms of number of hours) to complete a subject and the maximum marks in the subject is not spelt out explicitly and it varies across programmes. Second, in the existing structure comparison of workload across NIOS academic programmes is not feasible, as the effort required to complete the curriculum is not taken into account. Therefore, there is a need to develop necessary norms for computing the workload. Third, the comparison of workload for the same academic programme offered by different institutions is not possible. There are two implications of the above: one, in the absence of standardization of norms for computing workload, there is an adverse impact on quality of the academic programmes offered. Two, flexibility offered to students gets limited as they do not get benefits of credit transfer for courses completed in another institution or in a similar course of another programme. The problem is somewhat less in the academic stream, as the heterogeneity in academic courses is relatively less. The problem, however, magnifies in the vocational stream as there is wide variation across academic programmes in terms of duration, difficulty level, and evaluation procedure.

### **A Case for Credit System in NIOS**

It is worth mentioning that there is wide variation among diploma and certificate programmes of NIOS so far as the number of courses, essential contact hours, and evaluation pattern are concerned. In order to get an idea of the extent of variation across programmes, the characteristics of all the diploma programmes and certain certificate programmes are given in a tabular form in Appendix II. Following observations can be made from the table.

1. There are three diploma programmes offered by NIOS. The number of courses varies between 3 and 6, while the total marks in examinations ranges between 400 and 700 hrs. (Including theory, practical and assignments). The minimum duration of completing a diploma is 2 years in the case of one diploma programme (*Diploma in Radiography*) while in the remaining two cases it is one year (*Diploma in Basic Rural Technology* & *Diploma in Modern Secretarial Practice*).

2. In the case of certificate programmes the total Number of marks range between 100 and 600 Marks. The number of courses ranges between one and three. The minimum duration to complete a certificate programme is six months in some cases while it is one year in other cases.
3. The essential contact hours in some cases appears to be unreasonable. It goes up to 800 hours within a time span of one year, i.e., more than five hours per day (see Certificate in Footwear Design for example, duration-One year, Code-716). The feasibility of imparting that many contact classes needs to be looked into.
4. The duration of public examination could be of 1.5 hours, 2.0 hours, 2.5 hours or 3.0 hours. This creates a lot of confusion on the part of the examination department and monitoring of students at the examination centre.
5. There is a lot of heterogeneity in maximum marks in a question paper. The maximum marks in a question paper could be anything (30 marks, 40 marks, 70 marks, 90 marks, even 200 marks!).
6. The number of certificate programmes is higher because individual courses of a certificate programme are offered as separate certificate programmes. For example, in 'Certificate in Cutting, Tailoring and Dressmaking' there are two courses (codes 705 and 706). These two courses are offered as two separate certificate programmes viz., 'Certificate in Cutting and Tailoring' (code 605) and 'Certificate in Dressmaking'. Thus out of two courses three certificate programmes are created. However, these courses are not developed in a modular fashion so that there is a possibility of credit transfer and migration from one programme to another. The weightage of a certificate programme in the first instance is 400 marks while in the latter two cases it is 200 marks each.
7. There is no scope for credit transfer across vocational courses as these programmes are not developed on a modular basis <sup>7</sup>

It can be inferred from above that the workload on the part of a student varies across programmes. Students have to put in a lot of efforts in certain courses while in some others it is a cakewalk. In order to impart quality education, it is necessary to evolve a norm so that the workload on the part of students is uniform across courses. Prior to conversion into a credit system, standardization of the programmes is warranted.

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<sup>7</sup> Credit transfer is available in NIOS but limited to academic subjects.

Keeping in view such questions and limitations it is felt that there is a need for development of norms for standardization of student workload. For the purpose of standardization of weightage and content load for different types of programs, it proposed to introduce the credit system in NIOS. In the first phase, it may be experimented with the vocational courses and later on it can be extended to the academic courses.

Keeping above in view the major objectives of introducing credit system in NIOS can be stated as

- ◆ Alignment of NIOS Courses with National Vocational Qualification Framework (NVQF);
- ◆ Pave the way for accumulation, transfer and exemption of credits;
- ◆ Development of a mechanism for multi entry and multi exit facilities for the learners;
- ◆ Ensuring international acceptance of different courses; and
- ◆ Standardizing the norms for weightage and content load for different types of courses.

### **Suggested Changes in Structure**

Though credit system is available at the higher education level, so far there is no standardized norm for creditisation of courses at school level. On the basis of the analysis of the existing models and discussions held in the meeting of experts, the following model has been finalized for credit system in NIOS.

Based on the discussion in a series of meetings with experts, the following guidelines have been prepared.

1. Credit system is to be followed in all academic programmes of NIOS. For operational convenience it may be implemented in vocational programmes to begin with. Subsequently, it will be extended to Academic Department.
2. One credit is considered to be equivalent to student workload of 30 study hours. This includes the time devoted by students towards PCPs, practical, self study and doing homework/assignments.
3. A course can be of 4 credits or 8 credits. Thus a 4 credit course will involve workload worth 120 study hours for the student while a 8 credit course will involve 240 study hours.

4. In a course of 4 credits there should be 10 to 15 lessons. Similarly, the number of lessons in an 8 credit course will vary between 20 and 30. A lesson should be of 10-15 pages. Student workload and difficulty level should be kept in mind while deciding the number of lessons. For example, for a 4 credit course (120 study hours), if it is decided to have 10 lessons, then the difficulty level should be such that the student requires approximately 12 hours of study to complete a lesson.
5. NIOS will offer two types of academic programmes in vocational areas: Certificate Programmes, and Diploma Programmes.
6. While designing a Certificate Programme the following issues may be kept in mind.
  - a) A certificate programme will be of 12 to 16 credits. Total number of credits for a certificate programme will be decided in the Expert Committee which should be in the above range.
  - b) Minimum duration of a certificate programme will be of six months.
  - c) Maximum duration to be allowed to students to complete a certificate programme will be two years.
7. While designing a Diploma Programme the following issues may be kept in mind.
  - a) A diploma programme will be of 24 to 32 credits. Total number of credits for a diploma programme will be decided by the Expert Committee which should be in the above range.
  - b) Minimum duration of a diploma programme will be one year.
  - c) Maximum duration to be allowed to students to complete a diploma programme will be three years.
8. There is a difference between a programme and a course/paper. In each programme there will be more than one course/paper. Thus in a certificate programme there could be two courses – combined together these courses will add up to the desired number of credits (12 credits or 16 credits, as the case may be). Similarly, in a diploma programme the number of courses should add up to the requisite number of credits (24-32 credits).
9. There will be *two* broad types of assessment in each course/paper, viz., continuous assessment (assignment) and public examination. The

weightage for assignment will be in the range of 25-30 per cent while Public Examination will carry the remaining weight of 70-75 per cent (total 100 per cent). In the case of practicals/project work there will be no assignment. In practicals there will be a viva-voce which will carry 25-30 per cent weightage; remaining 70-75 per cent will be for practical examination. If the course/paper pertains to project work, the viva-voce will carry 25-30 per cent weightage while remaining 70-75 per cent will be for evaluation of project report.

10. The ratio between theory and practical components of a programme will be such that 50 to 70 per cent weightage is given to practicals. Thus theory will carry remaining 30 to 50 per cent weightage.
11. The essential contact hours (both theory and practical combined) should be in the range of 15 to 20 per cent of total study hours of a programme. For example, if a certificate programme is of 12 credits, then the total study hours (self study, contact classes, doing assignment, etc.) on the part of a student is 360 hours. Out of these, essential contact hours will be between 54 and 72 hours. Exact number of contact classes will be decided by the expert committee, which should be within the above range.
12. Each question paper will be uniformly of 100 marks, whether assignment or public examination. Thus public examination will be uniformly of 3 hours duration. Example: Suppose for a course Continuous Assessment : Public Examination = 30 : 70. The question papers of assignment as well as public examination will be set at 100 marks each. If a student secures 70 marks in assignment (out of 100 marks) and 80 marks in public examination (out of 100 marks), then his/her total score in the course/paper will be  $70 \times 0.30 + 80 \times 0.70 = 77$  marks.
13. Assignments will be done by students at their own place, while Public Examination will be conducted at designated examination centres as per NIOS rules. For practical examinations NIOS will decide the examination centre and evaluators. Observers (internal/external) may be deputed to examination centres. For conduct of practical examination a panel of external evaluators may be prepared.
14. All new courses will be designed according to these guidelines. The existing certificate and diploma programmes will be restructured/ revised according to these guidelines. Existing certificate programmes of one year duration will be reviewed to see the possibility of reducing the minimum duration to six months. Otherwise these may be split into two

certificate programmes of six months each, which can be offered in a modular manner. Similarly, two year diploma programmes may be split into two modular diploma programmes of one year each (in case minimum duration cannot be reduced to one year). Wherever possible modular structure should be followed in designing of programmes, so that students get benefits of credit transfer.

15. While deciding on the *nomenclature* of a programme, NIOS should take into account the guidelines issued by NVEQF, Sector Skill Council, MES courses of Ministry of Labour & Employment, Govt. of India or similar bodies.

### **Summary and Conclusion**

The NIOS, as in the case of other school level institutions in India, has pursued fixed subjects with marking system in its curriculum for educational programmes. In a recent decision on policy change however it has shifted from marking system to credit system for its educational programmes. These changes are at a nascent stage and are being implemented in the vocational programmes to begin with. It will entail further flexibility in educational programmes and help students in credit accumulation as well as transfer. Development of educational programmes on a modular basis and student assessment according to grading system will provide multi entry and multi exit facilities to the learners.

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## Appendix-I

## Subject Codes

## Secondary Examination

S. No.	Code	Subject
<b>Group 'A'</b>		
1.	201	Hindi
2.	202	English
3.	203	Bengali
4.	204	Marathi
5.	205	Telugu
6.	206	Urdu
7.	207	Gujarati
8.	208	Kannada
9.	209	Sanskrit
10.	210	Punjabi
11.	228	Assamese
12.	231	Nepali
13.	232	Malayalam
14.	233	Odia
15.	235	Arabic
16.	236	Persian
17.	237	Tamil
<b>Group 'B' (Core Group)</b>		
18.	211	Mathematics
19.	212	Science and Technology
20.	213	Social Science
21.	214	Economics
22.	215	Business Studies
23.	216	Home Science
24.	222	Psychology
25.	223	Indian Culture and Heritage
26.	225	Painting
27.	229	Data Entry Operations
<b>Group C (Vocational Course Offered in combination with Academic Courses)</b>		
28.	217	Typewriting (Hindi)
29.	218	Typewriting (English)
30.	221	Typewriting (Urdu)
31.	251	Jute Production
32.	252	Carpentry
33.	253	Solar Energy Technician
34.	254	Bio Gas Technician
35.	255	Laundry Services
36.	256	Bakery & Confectionery
37.	257	Welding Technology

## Senior Secondary Examination

S.No.	Code	Subject
<b>Group 'A'</b>		
1.	301	Hindi
2.	302	English
3.	303	Bengali
4.	306	Urdu
5.	309	Sanskrit
<b>Group 'B'</b>		
6.	311	Mathematics
7.	312	Physics
8.	313	Chemistry
9.	314	Biology
10.	315	History
11.	316	Geography
12.	317	Political Science
13.	318	Economics
14.	319	Commerce / Business Studies
15.	320	Accountancy
16.	321	Home Science
17.	328	Psychology
18.	330	Computer Science
19.	331	Sociology
20.	332	Painting
21.	335	Mass Communication
22.	322	Typewriting (Hindi)
23.	323	Typewriting (English)
24.	324	Stenography (Hindi)
25.	325	Stenography (English)
26.	326	Secretarial Practice
27.	329	Stenography (Urdu)
28.	364	Typewriting (Urdu)
29.	351	Plant Protection
30.	352	Water Manag. for Crop Production
31.	353	Oyster Mushroom Production
32.	354	Furniture and Cabinet Making
33.	355	Electroplating
34.	356	House Keeping
35.	357	Catering Management
36.	358	Food Processing
37.	359	Play Centre Management
38.	360	Hotel Front Office Operation
39.	361	Poultry Farming
40.	362	Soil and Fertilizer Management
41.	363	Preservation of Fruits and Vegetables

### Variation across programmes in number of papers, essential contact hours, and exam pattern

Sl. No.	Programme	No. of Courses (Codes)/ Modules of the program.	Minimum Duration	Entry Level	Essential Contact Hours (classes)		Exam. duration (hours)		Marks (all courses combined)			
					Theory	Practical	Theory	Practical	Theory	Practical	Assign.	Total
1	Diploma in Basic Rural Technology	Three courses 442- (100 marks) 443 (100 marks) 444 (200 marks)	One Year	8th Pass	Not	Specified	1+1+ 2 = 4	2+2+ 4 = 4	200	120	80	400
2	Diploma in Radiography	Six courses 430-Orientation to X-ray Department 431-Radiation Physics 432-Human Anatomy and Physiology 433-Dark Room Layout and Practices 434- Regional Radiography and Contrast Media 435-Advanced Imaging and Special Diagnostic Procedures (430 to 435)	Two Years	12th	90+120+ 120+80+ 90+100	110+80+ 80+120+ 110+100	3 hours each paper (six)	6 hours each for 4 papers	50×6 papers	100×4 papers	0	700
3	Diploma in Modern Secretarial Practice	Four courses 412- Secretarial Procedure 413- Computer Applications in Office 414- Business communication 415- Shorthand Writing	One Year	12th	40+5+ 40+50	20+10 0+100	3+2+ 3+1.5	2+2.5+ 1.5+0	70+30 100+30	30+70+ 70	0	400
4	Certificate in Early Childhood Care and Education	Three courses 439-Understanding the Child 440-Early Childhood Care and Education: Principles and Processes 441-Organising and Managing an Early Childhood Care and Education Centre	One Year	10th	190+190+ 220	110+110+ 80	3 hours each paper	2 hours each paper	70 marks each paper	30 marks each paper	0	300

5	Certificate in Computer Applications	Two courses 711- Basic Computing Skills 712- Computer Applications	One Year	10 <sup>th</sup>	190-190+ 220	110+110+ 80	3 hours each paper	2 hours each paper	70 marks each paper	30 marks each paper	0	300
6	Certificate in Desktop Publishing	One course 613- Desk Top Publishing (DTP)	One Year	10 <sup>th</sup>	80 hours each paper	160 hours each paper	2 hours each paper	2 hours each paper	40 marks each paper	60 marks each paper	0	200
7	Certificate in Web Designing	One course 622- Certificate in Web Designing (CWD)	Six months	10 <sup>th</sup>	40	100	2	2	40	60	0	100
8	Certificate in Advanced Web Designing	One course 633-Advanced Web Designing	Six months	10 <sup>th</sup>	60	100	2	3	80	100	20	200
9	Certificate in Computer Hardware Assembly	One course 616- Computer Hardware Assembly (CHAM)	Six months	12 <sup>th</sup> or CWD of NIOS	60	100	2	2	40	60	0	100
10	Certificate in Library Science	Three courses 436-Libraries: Functions and Services 437-Organisation of Lib. Materials 438-Records of Library	Six months	10 <sup>th</sup>	60	100	2	3	40	60	0	100
11	Certificate in Footwear Design	One course 716-Footwear Design and Production	One year	10 <sup>th</sup>	200 hours	50 hours each paper	3 hours each paper	No practical exam.	60 marks each paper	No practical exam	40 marks each paper	300
12	Certificate in Cutting, Tailoring and Dressmaking	Two courses 705-Cutting and Tailoring 706-Dress Making	One year	Literate	40 hours each	160 hours each	1.5 hours each	3 hours each	30 marks each paper	90 marks each paper	80 marks each paper	400
13	Certificate in Cutting and Tailoring	One course 605-Cutting And Tailoring	Six months	Literate	40	160	1.5	3	30	90	80	200
14	Certificate in Dress-making	One course 606-Dress Making	Six months	Literate	40 paper	160 paper	1.5 paper	3 paper	30	90	80	200
15	Certificate in Homeopathy	Two courses 718-Introduction to Homeopathy 719- Introduction Homeopathy Dispensing	One year	10 <sup>th</sup>	260 hrs total	100 hrs total	2.5 hrs. each paper	3 hrs. each paper	60 marks each paper	40 marks each paper	0	200

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16	Certificate in Community Health	Three courses 449-Basic Life Sciences 450-Maternal and Child Health Care 451-Prevention & Management of Diseases & Emergency	One year	10 <sup>th</sup>	34 + 33 + 33	100 hrs. each paper	3 hrs each paper	4 hrs each paper	70 each paper	100 each paper	30 each paper	100
17	Certificate in Electrical Technician	Two courses 701-House Wiring & Electrical Appliances Repairing 702-Motor and Transformer Rewinding	One year	10 <sup>th</sup>	100 hrs each paper	400 hrs + 300 hrs	1.5 hrs each paper	3 hrs each paper	30 each paper	90 each paper	80 each paper	400
18	Certificate in House Wiring and Electrical Appliance repairing	One course 601-House Wiring and Electrical Appliance Repairing	Six months	10 <sup>th</sup>	100	400	1.5 hrs	3 hrs	30	90	80	200
19	Certificate in Motor and Transformer Rewinding	One course 602-Motor and Transformer Rewinding	Six months	10 <sup>th</sup>	100	300	1.5 hrs	3 hrs	30	90	80	200
20	Certificate in Four-Wheeler Mechanism	Two courses 723-Four Wheeler Chassis Mechanism 724-Four Wheeler Engine Mechanism	One year	8 <sup>th</sup>	100 hrs each paper	300 hrs each paper	3 hrs each paper	4 hrs each paper	80 each paper	150 each paper	70 each paper	600
21	Certificate in Toy-making and Joyful Learning	Three courses 416-Learning through Toys 417-ART of Toy Making 418-Toy Making as an Industry	One year	10 <sup>th</sup>	120 hrs each paper	180 hrs each paper	2 hrs each paper	2 hrs each paper	40 each paper	60 each paper	0	300
22	Certificate in Bee-Keeping	One course 619-Certificate in Bee Keeping	Six months	8 <sup>th</sup>	60	140	2.5 hrs	3 hrs	40	60	0	100
23	Certificate in Indian Embroidery	One course 628-Certificate in Indian Embroidery	Six months	8 <sup>th</sup>	60	100	2	3	40	50	10	100

## **BOOK REVIEW**

### **Quality Assurance and Accreditation in Distance Education and e-Learning: Models, Policies and Research**

**Insung Jung and Colin Latchem**

Routledge, New York, 2012 , pp 285 , ISBN: 978-1-60752-120-4

There is somewhat little in the literature about Quality Assurance and Accreditation in Distance Education and online schooling, college or higher education , workplace training or non-formal adult and community education.

Taking the inferences from the research and the experience and expertise of the contributors, this book shows why and how these are applied across the world, the lessons learnt, and proposes frameworks and guidelines for their implementation.' The book is a compilation of 23 chapters , by invited contributors and edited and authored by experts with immense international experience in ODL , e –learning and Quality Assurance . The foreword from Sir John Daniel, President of the Commonwealth of Learning is very invigorating and provides an extremely succinct overview of the book and the issues arising. Although distance education continues to have an image problem and an active QA is a necessary for improving its reputation, as Sir Daniel pointed out.

This book provides comprehensive coverage of the practice and applications of quality assurance in distance education and some elements of e-learning around the world. The articles are in general well written and authoritative. The book is comprehensive in the sense that it covers the main issues and ways in which quality assurance has been applied, particularly in distance education.

The book has chapters which fall into more or less three section ,there are chapters that provide an overview of the main concepts behind quality assurance and accreditation ,then there are many chapters which deal with

the quality assurance in distance education and e-learning in different regions or countries around the world, in open universities or open schooling ,online schooling and workplace training and tele centres. The book has three concluding chapters, by the authors one on competencies and quality assurance, one on learners' perceptions, and a concluding chapter on quality matters. Where it is mentioned that "performance based approach to QA is yet to be explored by ODL providers". The book's authors also point out, that there is little research-based literature to guide policymakers, managers and practitioners in applying Quality Assurance (QA) in education and training to ensure the right balance is found between accountability and autonomy, as well as assuring quality for the time and costs involved.

Distance education organizations are not the same as traditional universities or institutions and shouldn't try to be. This means that different types of institution will and should evaluate and infer quality differently. Of course, this also requires greater understanding amongst potential learners and even more so, from the governments. It will be of greater value to those institutions and in particular to the areas of the world where distance education is still not accepted, and there are still many countries where this is the case. This book really brings home the struggle that distance education and online learning still have to prove their legitimacy, despite the sometimes extraordinary lengths that they have gone to demonstrate their quality.

The book also brings home how widespread the QA movement is in distance education, and how many countries and regions are struggling with similar issues. The individual chapters on what's happening in countries and regions as diverse as Indonesia, Korea, the European Union, Australia, Asia and North America are worth reading .

This is an important book, especially for distance educators, but will also be useful for administrators from conventional institutions that are moving into hybrid and fully online learning. It provides the current state of the art on quality assurance in this field.

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## **Report on Capacity Building Workshop For Tutors of National Institute of Open Schooling Using Blended Learning Model**

Adolescent Education Programme (AEP), Academic Department of National Institute of Open Schooling (NIOS) organized a 3 days Capacity Building Workshop for Tutors. It was organized on December 22-24, 2013 at 16 Regional Centres using the blended learning model with an objective to sensitize and train the tutors who will further impart education by conducting Personal Contact Program (PCP) in their states. In the workshop the technical sessions were conducted from HQ and the hands on sessions were conducted onsite ably supervised by Master Trainers.

The major objectives of the workshop were to:

- ◆ maximize the number of trained tutors for enhanced qualitative quotient
- ◆ introduce the group to life skills
- ◆ emphasize the need to include them in the course materials;
- ◆ internalize life skills for effective subject specific teaching-learning experience;
- ◆ promote and bring AEP concerns in the limelight keeping the life skills approach in mind; and
- ◆ Conduct integrated PCP sessions on learners to achieve these goals in restricted time frame.

The CBW of Tutors was simultaneously held at 16 Regional Centers across India. Master Trainers were presented in each location for the CBW. 514 tutors from 16 Regional Centers were trained simultaneously in this three days' workshop. This is not only a lot more than what would have been possible in a face-to-face model but also effectively controlled any dilution of information. This is the only method where groups from diverse regions were able to share views and also managed to set a healthy spirit of competition amongst them.

During the workshop “Learning Together Learning Better” Videos on participatory methodologies, developed by UNFPA were screened. These videos helped participants in understanding how life skills can be integrated in different subjects by applying participatory teaching methodologies. The

Tutors' Hand book of Participatory Methodologies designed to support the videos were distributed to the participants. This helped tutors understand the concept of life skills enriched self-learning materials. They could also internalize life skills for effective subject specific teaching-learning experience to be employed during the integrated PCP sessions with learners to achieve these goals in restricted time frame. Sessions on Evaluation process, the tools and techniques of the workshop provided an edge to this programme.

### **Methodology Used:**

Methodology adopted included the following:

1. Web conferencing
2. Face to Face hands on activity
3. Exposure to renowned Experts from Delhi
4. Theme based Video material
5. Different participatory methodologies based on Tutors' Hand book of participatory Methodology

### **Inaugural Session**

The session began with Presidential address by Dr. Kuldeep Agarwal, Director (Acad.) NIOS. He mentioned that this Capacity Building Workshop using the Blended Learning Approach and launch of virtual open schooling is a dream comes true for Hon'ble Chairman, NIOS. Director (Acad.) provided the background of the workshop by elaborating on the reasons to inculcate life skills into NIOS Curriculum and Self learning Materials. He commented that integration of life skills into NIOS curriculum must fill the gap of socialization and interaction, among learners and teachers of formal schooling, into open schooling system. He also elaborated on the so called "Jug-Mug theory" commonly followed by most of the teachers which contradicts the "Constructivist Approach of Learning". He said that that teachers and learners are the partners in the learning process and as per NCF-2005, learners have to be made independent and empowered to think for themselves. For this each tutor must be capable enough to inculcate life skills into their PCP sessions effectively. He said that workshop such as these will help tutors in this regard. Thanking MHRD and UNFPA for their support, he wished all the participants a very joyful learning.

### **Day 1: Session – 2**

The capacity building programme started with power point presentation on "Relevance of Life Skills Integration in School Education" through web conferencing by Dr. Jaya, National Programme Officer UNFPA. The

presentation was on importance of life skill's teaching which will develop broader perspective among the learners. These skills will not only develop creative and critical thinking but clear vision & prudence as well. It was further added that the target of teaching life skills to the learners can be achieved by talking and discussing with them about gender discrimination, prevention of aids and pros & cons of increasing population. The teachers can give them simple task so that they can observe themselves the existing and sensitive problems of the society and can start thinking over them.

The examples of an English lesson based on the time table of a little girl Meena was given to depict the routine work of her family members. In this example it was described how by allocating each member a household work irrespective of their gender we can change the gender stereotyping from the society. It was stressed on how the effort has been done to include all the life skills into a comprehensive curriculum and to make sure that a proper evaluation can be done through appropriate evaluation tools. Such tools can be many as self-assessment exercise etc.

Some more examples of different lessons in various subjects were also given which include the teachings of life skills. Factors that may contribute towards effective life skills programme and barriers to effective life skills programme were also talked about. It was followed by activities, group discussion and brain storming session on how to carry forward the process in PCPs sessions.

### **Day 1: Session 3**

Session 3, began with a power point presentation on Skills vs. Life skills through web-conferencing by Ms. Asheema Singh, PC(AEP). In the presentation core life skills like self-awareness, empathy, interpersonal relationship skills, effective communication skills etc were elaborated through examples. Fine difference between critical and creative thinking were clarified and the importance of problem solving, decision making, coping with stress and emotions in dealing with everyday life situations was explained. Along with describing the concepts of core life skills tutors were helped to understand how these life skills can help learners to become a better and successful human being. It was also discussed how these life skills can be integrated in the PCPs. It was a very interactive session as each of the query on how, what, and why on life skills integration, from participants of every Regional Centre was answered.

The presentation was followed by the screening of video no.5 of the Learning Together Learning Better video series at each Regional Centre. The video had a compilation of the experiences of the lesson writers of the life skills integrated study materials. It highlighted the new innovation and creativity in

integration of content, methodology and life skills in the text. After this the master trainers invited the opinion of tutors regarding how to take the process of integration forward.

#### **Day 1: Session 4**

Post tea session, screening of first episode of “Learning Together Learning Better” took place at Regional Centers. The participants found it very enriching to see that how the life skills could be integrated in different subjects using the participatory teaching methodology. In the context of this exposure of video, the participants were divided into subject wise groups. Hand book of Participatory Methodologies and selected lessons were handed over to the participants and they were asked to identify the learning junctions.

#### **Day 2: Session 1**

Interactive Methodologies; Screening of the episode 2 was shown to participants which was self-explanatory that how methodologies can creatively be incorporated to build life skills in a joyful environment for the co-construction of knowledge where role of teacher is that of a facilitator. Different types of activities to internalize this were performed at each Regional Center. Then, group activities were conducted based on the video 2 to identify learning junctions where participatory methodologies can be used and afterwards, every group presented subject specific presentations based on video 1 & 2 in mock sessions at Regional Centers.

The Tutors were fully engaged like true learners. Methodologies such as Role Play, Nukkad Natak, Quiz, Demonstration, Experiential learning, Deductive reasoning, Brain Storming were used on all 5 subjects i.e. Science, Social Science, Hindi, English and Home Science. The life skills empowered through these methodologies were: Empathy, Creative thinking, Critical thinking, Problem solving, Decision making, Self awareness etc.

#### **Day 2: Session-2**

The 2nd session of the day began with recapitulation of previous day's activities through web- conferencing. It was followed by a quick insight into the NIOS PCP calendar followed by an activity and group discussion on matching the content and methodologies for effective Learner engagement.

The next Mock sessions focused on languages – Hindi and English. Discussion on match between content and methodology and learner engagement on the basis of the given guidelines was carried out which was followed by an open house question and answer session.

### **Day 2: Session 3**

The post lunch session was devoted to one of the most important aspect of education –Evaluation. It was conducted by Prof. H.S.Srivastva, Former Head, Department of Measurement and Evaluation, NCERT through web-conferencing; Explaining the difference between measurement and evaluation the session focused on the Basic Principles of Evaluation. The presentation covered the following important aspects:

- ◆ Characteristics of good questions
- ◆ Preparation of different forms of questions and the purpose of their use
- ◆ Fundamentals of question paper preparation (Designs, Blueprints and Marking Schemes)
- ◆ Marking scheme and the use of value points in evaluation
- ◆ How to write feedback comment on TMAs.

This activity was web conferencing based. Tutors became very inquisitive and enthusiastic during this session and posted innumerable queries via chat & video based interaction.

### **Day 2: Session 4**

Handouts of actual TMAs submitted by learners of the five subjects were distributed amongst the participants. Evaluation of T.M.As was undertaken by each participant. They were asked to evaluate the TMA and give a feedback on each TMA. It was face to face hands on activity under the supervision of Master trainers.

### **Day 2: De-Briefing**

Following Regional Centres presented the de-briefing of second day in the evening through web conferencing:

1. Session 1: Raipur Regional Centre
2. Session 2: Kolkata Regional Centre
3. Session 3 & 4: Delhi Regional Centre

Debriefing and briefing were used as a monitoring tool. It served as an effective interactive platform between all the Regional Centers and Head Quarter. During these sessions participants posted many queries through chat, video mode or by using the tool of raising hand.

### **Day 3: Session 1**

The third and the final day began with the presentations on differences between teaching and facilitation and optimal use of NIOS material and Mukta Vidya Vani through LCD projectors by master trainers at Regional Centers.

### **Day 3: Session 2**

Mock sessions were conducted at each Regional Center during the second session. In this session presentations by the participants on transaction of lessons was followed by the discussion on the match between content and methodology and learner engagements.

The group also presented feedback on tutors comment for TMAs. It was also discussed the impact of negative comment keeping in view the feedback for improvement of learner. Then, subject wise presentations of the mock sessions were carried out by participants from different regional centre.

### **Day 3: Session 3**

Dr. H. S.Srivastava discussed the comment on feedback of TMA from most of the Regional Centers. He also responded to the queries on evaluation. Director (Academic) and Asst. Director (academics) were also present in this session. Apart from clarifying many queries regarding TMA they also took a number of questions on English and Hindi Language. They gave their expert comments and valuable suggestion to the participants.

### **Day 3: Session 4**

In the last session the queries posed by participants from different Regional Centers were clarified. The Way forward for the learning engagement Activity that would be undertaken in year 2014 was presented and it was emphasized that each participant, Master Trainer and NIOS official has to work in tandem in bringing quality education to the learners. Participants from various Regional Centres like Hyderabad, Kolkata, Jaipur, Bengaluru raised hands and had their queries resolve.

The workshop ended with valedictory session. Participants from various Regional Centres like Pune, Kochi, Bengaluru etc gave their feedback and comments regarding the programme. All participants took an oath to apply the learning in real life situation for the benefit of learners. Vote of thanks was presented by Project Coordinator AEP.

The workshop was coordinated by **Ms. Asheema Singh**, Project Coordinator, AEP

**Report prepared by**  
**Ms. Asheema Singh\***  
**MS. Shakeba Umar \*\***

\* UNFPA Consultant & Project Coordinator (**Adolescence Education Programme**), NIOS

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The articles for COMOSA Journal of Open Schooling should provide useful information about Open Schooling system. In order to ensure the quality and standard of the articles/papers, the received articles/papers are reviewed by a panel of experts in the field of open and distance education and only the selected articles/ papers are considered for publication in the journal. If the article is print worthy with certain modifications, the author may be asked to do the needful.

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