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1. INTRODUCTION

Human resource development is one of the key factors for the success of educational system in any country. Development of the right kind of human resources depends on many aspects such as the purpose of the human resources, length of the programme of study, quality expectation, characteristics of the learner, etc. Long ago, formal system of education was considered to be the only method of human resource development. The scenario changed rapidly due to the introduction of distance learning programmes. Even within the system of learning, the method of learning too has undergone tremendous changes. The approach of “capsule learning” enables learners to learn at his/her own pace and convenience. In addition to this, the options available for the learner are also wide and therefore, the learner in the present world has the opportunity to decide what he/she wants to learn. Countries, which try to increase the literacy and quality of education, adopt these flexible methods to prepare the required human resource.

In India, the human resources development system has witnessed substantial growth in the recent past. The institutes responsible for human resources development have grown in large numbers. At present, India has more than 150 Universities, 20,000 colleges of higher education, 800 colleges of education, and so on. These are aimed at developing human resources for various disciplines, including that of education.

Disability in India is reported to be approximately 5 to 10% of the population and to serve this population, particularly at the school level there is a tremendous need for trained human resources. Though it is ideal to expect all human resource development organizations in the country to assume responsibilities for the human resource development for Special Education too, the reality is different. Only a handful of institutions at the national level are involved in this area. As per the data available from the Rehabilitation Council of India, only about 180 institutions in the country are involved in human resources development at all levels for all categories of disabilities, and this number is extremely low when compared with the actual needs.

As per the manpower development projection made by the Rehabilitation Council of India, there was a need for 3,62,300 trained professionals in the IX plan to serve the disabled population in India. The projection for the X plan is 7, 24,600 professionals and at the current pace of training it would

take several decades to meet the target (Manpower Development Report, RCI, 1995). As is evident from the RCI report, reaching out this vast magnitude of unreached population can be a reality only when there are abundant resources in terms of finance, infrastructure, manpower and necessary equipment. Being a developing nation with only about 75% of its population literates, this process of reaching out may take a long time.

If through the existing system the target could not be met, implementation of innovative systems and practices are necessary to realize the goals set. A viable system catering to the needs becomes imperative to revitalize the existing system, so that the production is more in number with no compromise in quality. Credit accumulation and transfer system may come in handy to meet the requirements at a considerable pace.

Credit System

Though the term credit system is quite popular in the western countries it is not strange in the field of education in India. Certain institutions like the Indira Gandhi National Open University, Indian Institute of Technology, Anna University, SNDT Women's University etc., are already following the credit system in some of their courses, if not all. There is ample evidence that the existing system in these institutions enable the taker of a particular course to learn at his/her own pace and there is adequate flexibility to go for more than one course at the same time.

The academic credit is the unit of measure of the workload requested of each student in order to carry out the various activities of the university programme. A credit corresponds to specific hours of work for each student. Credits are obtained according to the student's grades when an examination is registered or through other appropriate methods for assessing the knowledge acquired by a student. The credit system facilitates the scheduling of each student's workload thus allowing teachers to measure the amount of study required for each examination in a realistic manner. For this reason, universities fix the proportion of credits to be assigned to lectures, class work, experiments and practical work, periods of training, seminars, tutor - guided activities, individual work, assignments, extra curricular activities, theses and other training activities in order to establish a modular educational model for taking the final degree. This system provides an objective quantitative parameter that permits comparison between the learning and research activities students have carried out during their studies. It also enhances student mobility and

improves co-operation between the universities/institutions implementing the system.

Across the globe there are several types of credit accumulation and transfer systems are being practiced and there is no single viable system which is being followed in all the universities/institutions. The credit systems being followed are unique according to the subject, course, and duration etc., Credit systems being followed across nations and within a nation itself have individual characteristics and a study of the existing systems may throw light in the conception of the system.

Various Credit Systems

An appraisal of various credit systems prevailing in western countries has been made in the following account:

European Credit Transfer System (ECTS)

The European Credit Transfer System (ECTS) was developed by the Commission of the European Community in order to provide common procedures to guarantee academic recognition of studies abroad. It provides a way of measuring and comparing learning achievements and transferring them from one institution to another. ECTS credits are a numerical value (between 1 and 60) allocated to course units to describe the student workload required to complete them. In ECTS 60 credits normally represent the workload of a year of full time studies, 30 credits a semester and 20 credits a term. A learning agreement gives the student a guarantee in advance that the credits for the approved programme of the study will be transferred.

The American Credit System

American degrees, both undergraduate and graduate, are earned on the basis of the number of courses successfully taken. The number of credits earned by each course relates to the number of hours of classroom work involved, but does not necessarily correspond exactly. For instance, a course meeting three times a week for an hour (actually 50 minutes) each time may be expected to give a student three credit hour for the semester or term. On the other hand, an intensive seminar may meet once a week for two hours and also be a three credit course. Two or three laboratory periods are usually considered to be equivalent to one class "hour". The undergraduate student programme, known as an "academic load", is normally 15-17 units a semester, or 12 to 15 units a quarter. The graduate student's normal load is 9-12 units.

The Dutch Credit System

The workload of students in higher education in the Netherland is expressed in credits. One year of study has 42 credits, which correspond to the 42 weeks that make up an academic year. The total number of credits for a semester is 21.

The Swedish Credit System

One Swedish credit equals one week of full-time studies. Thus, after one semester of successful full-time studies (passing the examinations) the student is awarded 20 Swedish credits (equivalent to 30 ECTS credits).

RCI's Initiatives for Introducing Credit Accumulation System

About 5 to 10% of the population in our country requires trained human resource for their education, employment and rehabilitation at different stages of life. This could be achieved if sufficient number of training programmes are made available for the training of facilitators / rehabilitation professionals and personnel to meet the life cycle needs of persons with disability. The RCI's approved training programmes are of one year or more duration and hence it is difficult for in-service and practicing personnel/family members of the disabled people to undergo the training on full time basis at a stretch.

In the developed countries, the concept of credit system has taken its roots in their educational system for its flexibility in terms of pace and convenience. IGNOU has already adopted the system where a credit point is accepted to be equivalent to 30 hours of study. This includes all learning activities such as reading, comprehending course materials, doing self check exercises and assignments, listening to audio programmes and viewing video programmes related to course, reading additional supplementary materials and attending the tutorials.

A module is a sum of educational activities leading to competencies at a certain level. Each module, while being a part of the whole also has a stand alone feature that permits its use independently of the rest of the programme. The modularity of programmes allows a learner to complete a programme as per his/her convenience, need, ability and pace of learning. The learner accumulates credits from different modules of a programme. The system has its advantages for vertical as well as horizontal up-gradation. Time will be saved by not repeating whatever has already been learnt.

The first meeting on credit system, which was a kind of brain storming session, was held on 28th February and 1st March 2002 at the National Institute for the Mentally Handicapped, Secunderabad. The experts unanimously agreed that it is possible to introduce modular and credit system in the existing courses of RCI.

In the mean time, International Human Resource Development Centre for the Disabled (IHRDC), Ramakrishna Mission Vidyalya, Coimbatore which has already been working on a Govt. sponsored research project on Credit System, extended its expertise to the RCI for transferring standardized and operational course curricula into credit based system. The second meeting on credit system took place in December 2002 at New Delhi where General Guidelines were developed for the implementation of credit accumulation system.

In another meeting held on 17th March 2003 at RCI, it was agreed that the credit system may be introduced initially in Special Education courses at different levels. Basic parameters were finalized for Diploma in Special Education courses for the revised curricula at Diploma level in Special Education of two year duration.

It was agreed that if the system is implemented successfully, it will help in:

- looking for equivalence of the courses among institutions;
- recognition of courses of one institution by another;
- mobility of students from one institution to other institution by credit transfer system;
- gaining knowledge and skills in other disability areas without re-learning those content areas that have been already learnt and thereby saving time, money and energy; and
- vertical up-gradation of qualification by saving time through credit exemptions.

Subsequently, last meeting was held at New Delhi on November 11-12, 2003 where Broad Framework and General Guidelines for the implementation of credit System discussed during a series of meetings, referred earlier, were given final shape. The guidelines and framework so finalized were arrived at after active participation and consent of more than 25 Universities (represented by the Dean of Education Faculty, Head of the Department of

Special Education and Registrar from each University) conducting RCI programmes, 2 to 3 Course Coordinators from each disability areas conducting RCI approved Diploma courses, academicians, professionals, NGO representatives, RCI representatives etc. The following chapters discuss the Operational Definitions of the terms used, Framework, General Guidelines, and Mechanism for Implementation of credit system.

2. OPERATIONAL DEFINITIONS

a) Credit

One credit in face to face teaching learning situation for RCI standardized and approved courses at Diploma and Degree courses may be defined as follows:

- i) *For Diploma courses 1 credit in theory means 18 hours and 1 credit in practical means 36 hours.*
- ii) *For Degree courses (B.Ed. & M.Ed. in Special Education) 1 credit means 20 hours each in theory and practical.*

Note:

The disparity in credit hours for Diploma and Degree courses is due to the variation in total instructional hours for practical and theory papers in an academic year. For Diploma courses total hours are 2592 in two years (approx. 1296 hrs in a year), whereas for B.Ed. and M.Ed. courses the total hours are 1080 in an academic year. The total hours do not include the learners' self study time or library consultation etc.

b) Credit Accumulation

Number of credits earned by a learner at a given point of time may be called as credit accumulation. One may accumulate a maximum of 50 credits for Diploma courses in a year. However, a learner must accumulate a minimum of 10 credits for Diploma courses. A centralized evaluation system will be set up to keep records of the credits accumulated by the learners. If a learner completes a course successfully, s/he will be exempted from studying the course contents which have already been studied earlier, meaning thereby that the credits for the exempted course contents will be included in the learner's account for the present course being undertaken.

3. BROAD FRAMEWORK

Broad Framework for credit accumulation system for diploma courses is shown in Table 1. In Diploma courses, the number of working days is estimated as 220 in an academic year, thus providing 1320 hours at the rate of 6 hours per day. Thus there would be 2640 hours in two academic years. While taking the time consumed for admissions, vacations, preparatory holidays, conduct of examinations etc. in to consideration, the number of hours have been reduced to 2592.

Table - 1

CREDIT SYSTEM FOR DIPLOMA COURSES

THEORY	1	CREDIT	18
PRACTICAL	1	CREDIT	36

AREA	PAPER	HOURS	CREDITS
CORE	1	72	4
CORE	2	72	4
CORE	3	72	4
CORE	4	72	4
DISABILITY SPECIFIC	5	72	4
DISABILITY SPECIFIC	6	72	4
DISABILITY SPECIFIC	7	72	4
DISABILITY SPECIFIC	8	72	4
DISABILITY SPECIFIC	9	72	4
DISABILITY SPECIFIC	10	72	4
DISABILITY SPECIFIC	11	72	4
SCHOOL SUBJECT	12	72	4
SCHOOL SUBJECT	13	72	4
SCHOOL SUBJECT	14	72	4
TOTAL THEORY		1008	56
PRACTICAL		1584	44
GRAND TOTAL		2592	100

4. GENERAL GUIDELINES

General Guidelines have been finalized for the implementation of Credit System by dividing the course curriculum into following 4 types of courses:

1. Independent courses
2. Theory-cum-practical courses
3. Sequential courses
4. Stand alone/Modular courses

Independent Courses

- Independent courses have been identified and credits assigned for each theory and practical paper by modifying total hours wherever necessary.

Theory-cum-practical courses

- There would be course papers, wherein theory is interlinked to practicum. For such courses, the learner should accumulate credits by undergoing the study in theory and practicum simultaneously or within a span of six months of earning the credits for theory.

Sequential courses

- Sequential courses are those which must come in proper logical order. Without the completion of pre-requisite courses, the learner will not be allowed to study the sequential courses.

Stand alone/Modular courses

- Stand alone courses for credit accumulation/exemption have been identified disability wise. Some of the topics form part of the syllabi and some are independent which may be attended by anyone having passed 10th class. The course outline is being developed topic-wise.
- These stand alone courses will help the learner to acquire specific skills and knowledge in the selected area of study. When the individual wants to go for further studies, these credits may be transferred as per the guidelines of RCI.
- The certificate to be provided by RCI will clearly indicate that the skill acquired through the stand alone course does not qualify the person automatically for teaching profession and registration with RCI.

- Eligibility need not be insisted for entry into stand alone practical courses, however, the minimum entry requirement of 10th should be prescribed. For theory oriented stand alone courses, the eligibility meant for the respective courses should be made mandatory for transfer of credits. However, when credit transfer is made for higher level courses, the person should have the eligibility meant for that course.
- The transfer of credits for stand alone courses should be done within a maximum of 5 years. The certificate becomes invalid for transfer if it goes beyond 5 years.
- Wherever stand alone courses are not possible within the existing courses, curriculum needs to be developed for certain skill based courses in the respective disability areas. Some stand alone courses may be common to all disability areas. The learner may undergo these courses for acquiring knowledge which is not covered in his/her original area of study. The award of credits for these types of courses will be decided by RCI.
- The stand alone courses may be offered by any institute approved by RCI on self-sustainable basis.

General

- Duration to be allowed for completing a full-course through credit accumulation system for Diploma level course is minimum 2 years and maximum of 5 years.
- One may accumulate a maximum of 50 credits for Diploma in a year, however, a learner must accumulate a minimum of 10 credits.
- A centralized evaluation system will be set up to keep records of the credits accumulated by the learners.
- The Institutes selected for implementing credit system on experimental basis will give the feed back after 2 years of implementation on the basis of which the whole programme will be reviewed.

- RCI will also work out modalities to allow transfer of credits from general education programmes too for the general teachers and professionals to undergo courses in special education and vice-versa.
- The transcript of the student undergoing courses through the credit system will clearly specify the number of theory and practical credits accumulated by the student.

5. MECHANISM FOR IMPLEMENTATION

1. To begin with, the two year Diploma courses in HI, MR and VI will be taken up for implementing credit accumulation system.
2. With the help of experts the outline of content areas for each of the stand alone courses will be prepared and classified as those meant for any learner at the diploma level and those that can be offered to higher level courses. The courses will be developed in such a way that the curriculum addresses the content areas covered in diploma and graduate level Special Education courses respectively. Guidelines will be developed for selecting institutions to offer these courses.
3. Few institutions will be selected in the country on pilot basis and an evaluation of the entire program will be made after two years.
4. Orientation courses will be organized for the institutes selected to implement credit accumulation system in the formal courses as well in the stand alone courses.
5. A centralized system of monitoring, evaluation and record keeping will be developed for the implementation of Credit Accumulation System.
6. Based on the results of the first batch by implementing the system in Special Education courses, other diploma courses will also be considered for offering through credit accumulation system.

The method of credit accumulation system for the Diploma courses is given in annexure 1.

Annexure 1

CREDIT ACCUMULATION FRAMEWORK FOR DIPLOMA IN SPECIAL EDUCATION (VISUAL IMPAIRMENT)

Key:

IC - Independent Courses; TPC - Theory-cum-Practical Courses; SMC - Stand Alone / Modular Courses; SC - Sequential Course only after the completion of the pre-requisites; which may be completion of a theory or practical or theory-cum-practical courses depending on the subject of specialization.

In the case of specialization in visual impairment, the Project Work, which is considered a Sequential course should be undertaken only after the completion of the Theory-cum-Practical Courses.

S. No.	Area of Study	Title	Type of Paper	Hours	Credit
1	Core Paper	Introduction to Disability and Psychosocial Implications of Disability	IC	72	4
2	Core Paper	Education in the Emerging Indian Society	IC	72	4
3	Core Paper	Child Growth and Development	IC	72	4
4	Core Paper	Planning and Management of Special and Inclusive Education	IC	72	4
5	Disability	Education of Visually Impaired Children	TPC 1	72	4
6	Disability	Medical, Psychological and Social Perspectives of VI	IC	72	4
7	Disability	Teaching of Plus Curricular Activities	TPC 2	72	4
8	Disability	Education of Children with Low Vision	IC	72	4
9	Disability	Education of visually impaired children with additional disabilities	TPC 3	72	4
10	Disability	Integrated and Inclusive Education	IC	72	4
11	Subject	Teaching Mathematics to Visually Impaired Children	TPC 4	72	4
12	Subject	State Language and English	TPC 5	72	4
13	Subject	Social Studies	TPC 6	72	4
14	Subject	General Science	TPC 7	72	4
15	Practicum	Braille	SMC	180	5
16	Practicum	Orientation and Mobility	SMC	108	3
17	Practicum	Use of Special Appliances	SMC	108	3
18	Practicum	Preparation of TLM	TPC 2	108	3
19	Practicum	Practice Teaching - Maths	TPC 4	72	2
20	Practicum	Practice Teaching - English	TPC 5	72	2
21	Practicum	Practice Teaching - Social Studies	TPC 6	72	2
22	Practicum	Practice Teaching - Science	TPC 7	72	2
23	Practicum	Practice Teaching - Disability	TPC 1	252	7
24	Practicum	Practice Teaching - Disability	TPC 3	108	3
25	Practicum	Community Based Teaching	SMC	72	2
26	Practicum	Teaching ADL Skills	SMC	108	3
27	Practicum	Preparation of Tactile Materials	SMC	36	1
28	Practicum	Project Work	SC/TPCs	216	6
TOTAL				2592	100

CREDIT ACCUMULATION FRAMEWORK FOR DIPLOMA IN SPECIAL EDUCATION (HEARING IMPAIRMENT)

Key:
IC - Independent Courses; TPC - Theory-cum-Practical Courses; SMC - Stand Alone / Modular Courses; SC - Sequential Course only after the completion of the pre-requisites; which may be completion of a theory or practical or theory-cum-practical courses depending on the subject of specialization.

In the case of specialization in hearing impairment, full-time Practice Teaching, which is considered a Sequential course should be undertaken only after the completion of all the 20 areas.

S. No.	Area of Study	Title	Type of Paper	Hours	Credit
1	Core Paper	Introduction to Disability and Psychosocial Implications of Disability	SMC1	72	4
2	Core Paper	Education in the Emerging Indian Society	IC	72	4
3	Core Paper	Child Growth and Development	SC1	72	4
4	Core Paper	Planning and Management of Special and Inclusive Education	IC	72	4
5	Disability	Introduction to Hearing Impairment	TPC1	72	4
6	Disability	Education of Children with Hearing Impairment	IC	72	4
7	Disability	Language and Communication	TPC2	72	4
8	Disability	Fundamentals of Hearing, Hearing Impairment & Audiological Management	TPC 3	72	4
9	Disability	Fundamentals of Speech & Speech Teaching	TPC4	72	4
10	Disability	Curricular Strategies and Adaptations for Children with Hearing Impairment	TPC 5	72	4
11	Disability	Family, Community and the Hearing Impaired Child	SMC2	72	4
12	Subject	Content & Methodology of Language Teaching : English / Regional Languages	TPC 6	72	4
13	Subject	Content & Methodology of Teaching Science and Maths	TPC 7	72	4
14	Subject	Content & Methodology of Teaching Social Science	TPC 8	72	4
15	Practicum	Full-Time Practice Teaching	SC	252	7
16	Practicum	Practice Teaching	TPC 5,6 & 7	828	23
17	Practicum	Individualized Teaching	TPC5	72	2
18	Practicum	Skill Development	TPC 2	72	2
19	Practicum	Clinical Practicum - Audiology	TPC 1 & 3	144	4
20	Practicum	Clinical Practicum - Speech	TPC 4	144	4
21	Practicum	Clinical Practicum - Psychology	SC1	72	2
TOTAL				2592	100
