## Research Studies on Tertiary Education Sector

# Development of a Credit Accumulation and Transfer Scheme (CATS) for the Sri Lankan University Sector

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## A. Preamble

### Terms of reference

''To undertake a research study to design a Credit Transferring Mechanism for the University System in Sri Lanka''

This is the report of a research study conducted to formulate a Credit Accumulation and Transfer (CAT) Scheme appropriate to the university system in Sri Lanka. Student mobility is a key issue in promoting not only academic collaboration between Higher Education Institutions, but also the recognition of academic standing and enhancement of academic standards between them. An appropriate CT scheme is thus a must in this regard. Initially, the following factors were identified as being of considerable importance:

- A CAT Scheme should facilitate the mutual recognition of credits and qualifications awarded by the universities
- Such a scheme should evolve round the particular needs and characteristics of the higher education institutions and the national education system in Sri Lanka
- It should be compatible with similar schemes prevalent elsewhere in the world.

## B. Problems Identified

- Non-implementation of the Sri Lankan Credit and Qualification Framework (SLCQF) completed in October 2004 as part of the Quality Assurance Project in the University sector.
- Absence of Learning Outcomes at programme and module levels in respect of a majority of programmes of study.
- Absence of Assessment Criteria in respect of constituent modules of a majority of programmes of study.
- Presence of asynchronous academic years in the Sri Lankan university sector.
- Absence of codes of practice for Accreditation of Prior Learning (APL) and accreditation of Prior and Experiential Learning (APEL).

## C. Methodology

The first phase entailed initial consultations and an attempt to take cognizance of the existing modular structure of the programmes of study at the SL universities. The second phase addressed the strategic issues facing the credit transfer schemes, progression and credit frameworks.

The final phase of the project considers the analysis of the information gathered as the basis for the preparation of the present report and its recommendations.

# CHAPTER 1

## OVERVIEW OF AVAILABLE LITERATURE ON CAT SCHEMES

This chapter contains an overview of some of the available literature pertaining to the development of academic credit and Credit Accumulation and Transfer Mechanisms currently in use.

## 1. Academic Credit

### 1.1 History of Academic Credit

Academic C*redit in respect of* a particular module of a programme of study is a measure of the total time commitment or of the workload, required of a typical student pursuing that module and had its origins in the S*tudent Credit Hour*, an American innovation , designed to streamline the admission of high school students to Colleges at the end of the nineteenth century [23,36]. Although the Carnegie Foundation, established in 1905, did not develop the concept of the Unit of Credit, the Foundation was instrumental in facilitating the wide acceptance of the measure.

With the introduction of the modular systems in educational institutions, the concept of quantifying modules by way of credits and credit accumulation was an inevitable outcome[36].

### 1.2 Concept of Credit

It is pertinent to take cognizance of the definitions and or views about the academic credit. Given below are some of the definitions formulated by various agencies.

The Analytic Quality Glossary:

*A credit is recognition of a unit of learning, usually measured in hours of study or achievement of threshold standard or both*[28]

UNESCO:

*A credit is a generally agreed-upon value used to measure a student workload in terms of learning time required to complete course units, resulting in learning outcomes. Generally, once gained, credit cannot be lost* [28].

Scottish Qualification Authority:

*The amount of time that an "average" learner at a specified level might expect to take to achieve the outcomes regardless of the mode of delivery or* assessment [3].

Credit guidelines for HE qualifications in England, Wales and Northern Ireland [10]

*A Credit helps to make learning flexible, adaptable, valued, accessible, tailor-made, quality driven and market led*.

European Credit Transfer and Accumulation System(ECTS) [14] :

*The currency to measure student workload in terms of notional learning time required to achieve specified learning outcomes..*

Credit Common Accord for Wales[12] :

*An award made to a learner in recognition of the achievement of designated learning outcomes at a specified credit level. Credit is only awarded following quality assured assessment of achievement.*

*No additional credit can be awarded for achievement over the threshold level (established by the learning outcomes and assessment criteria) although such achievement can be recognised through the award of marks or grades.*

*No credit should be awarded for units where the learning outcomes have not been achieved)*

Northeast Texas Network Consortium [28] :

*A credit is the value assigned to a module. Usually one credit equals one 50 minute class period per week. Many modules carry 3 credits and meet for three 50 minute periods a week.*

The New Zealand Qualification Authority and the South Africa Qualification Authority also define credit on 'notional learning hours' but are more explicit in including the time spent 'in doing assignments and time spent in assessment'

Having taken into consideration the essence of the above definitions,

*Academic Credit can be described as a value allocated to a module to describe the student workload required to complete it, this value reflecting the quantity of work each module requires in relation to the total quantum of work required to complete a full year of academic study.*

A fundamental assumption is that an academic credit for a given module measures all of the work the student has completed including contact teaching hours with an instructor in classes, seminars, laboratories, or field work, as well independent study time in the library, group or individual work, and preparation for examinations.

### 1.3 Different Types of Credit in Use

There are two major types of Credit in use in the world. Whilst the Carnegie Credit used in North America is a time-based quantitative measure dependent on student contact hours, the Credit used in the United Kingdom and the rest of Europe is based on notional learning time, being a value allocated to a module commensurate with the student workload required to complete it.

Credit can serve a number of different purposes , but is essentially a tool for measuring and assessing the equivalence of learning by an individual. It plays an important role in contributing to the definition of academic standards and the attribution of credit values to modules and programmes of study helps to define the standards of qualifications. It also provides a mechanism for higher educational institutions to design modules/ programmes of study in different disciplines that are similar in volume of learning and in intellectual demand. It also provides a basis for recognising learning achieved in other institutions. Moreover, it is widely acknowledged that credit has an increasingly important role in recording student achievement and also in providing support for students and administrators alike in a student's progression both into and within an education system. It does represent an important measure for promoting academic mobility..

### 1.4 The use of Credit in Sri Lankan Universities

The use of Credit as a measure of the volume of learning commenced in a few Faculties of the Sri Lankan Universities with the modularisation of the curriculum in

the year 1990. Presently, a majority of the Faculties are using Credit for the said purpose. It is encouraging that some of the Faculties have adopted the internationally accepted *Carnegie Credit* used in the North American Universities. This tendency will help Sri Lankan Universities to converge on the Carnegie credit as the common credit currency. Even if some Faculties continue to use different Credit currencies , it is possible to establish the Carnegie Credit as the hypothetical measure for purposes of comparison and conversion.

As stated earlier, credits serve to measure and assess the equivalence of learning and help in defining standards of qualifications and in the recognition of modules or programmes of study.

How can a module be designed or structured not only to gain recognition but also to satisfy the needs of the learner in relation to the accomplishment of the intended competencies? To answer the above question, it is worthwhile considering credit allocation and also some of the practiced educational systems.

## 2. Methods of Credit Allocation and Calculating The workload

### 2.1 Methods of Credit Allocation

*Three different methods of credit allocation*[16] *, each of which may be the best one to use in individual situations are:-*

A. The Impositional Method

B. The Compositional Method

C. Credit Allocation by Reference to Learning Outcomes**.**

*The impositional allocation of credits or top-down method*

This is, when possible to employ it, the easiest method to allocate credits. Where an educational institution has a clear-cut and sufficiently detailed programme for the achievement of each of its particular academic goals such as Bachelor/Master

Degrees, then it may well be relatively easy to allocate credits between the various constituent modules of that programme and to do so semester by semester or year by year.

*The compositional method of credit allocation or bottom-up method*

In this method, allocation of credits in respect of a module was based on the number of teaching hours for each module, with the assumption that the number of teaching hours reflects more or less the workload involved for the student i.e. the student workload. .

## 2.2 Methods of Calculating Workload

In practice different approaches are used to calculate the student workload [42,43].

In the calculation of workload, the following parameters play a role:

- The total number of contact hours in respect of the module ;
- Preparations ;
- The amount of further independent work required to complete the course successfully.

The last parameter is the most difficult one to gauge and depends largely on the complexity of the topic.

Independent work may contain one or more of the following items:

- The collection and selection of relevant study material;
- Reading and the study of that material;
- Preparation for an oral or written examination;
- Writing a paper or dissertation.

### 2.3 The Method of Credit Allocation by Reference to Learning Outcomes

Allocation of credits in respect of a module was based on the number of teaching hours for each module, with the assumption that the number of teaching hours reflects more or less the workload involved for the student [16].

By being very precise in identifying and enumerating what are known as *the Learning Outcomes and Competences* in respect of a module, one can calculate the number of student hours which may be required to successfully complete a module and hence allocate the number of credits assigned for a module

The definition and a detailed description of Learning Outcomes will be given later in Chapter 2.

## 3. Credit Systems

According to the definition of the European Commission for ECTS[16] ,

*a Credi 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.

Credit systems were first developed in North America, and remain in more extensive use there than elsewhere. It was in 1886 that the Harvard University introduced an 'elective system' giving a student the choice of the modules he or she intends pursuing rather than to follow a strictly prescribed curriculum in following a programme of studies. The American credit system thus developed has remained more or less unchanged to date.

In the above system, learning experience is segmented into calibrated units or modules, which can be accumulated in order to gain an academic award. It not only offers a multitude of possible combinations but also the opportunity to study at different times and or in different places. The American credit system is the prototype of a credit accumulation system where the main objective is the

accumulation of academic credit within the same institution. Credit transfer from one institution to another is not system-immanent. The main advantages of the American credit system are increased flexibility, increased efficiency of learning and improved cost-effectiveness.

### 3.1 Credit Transfer Systems

Credit Transfer is the process whereby credit already achieved for a complete or incomplete qualification at a quality assured tertiary institution is recognised towards another qualification. It involves the evaluation of a student's transcript, course outlines and other information relevant to the application. Types of approval for credit transfer may be described as one or a mixture of the following [13]: ***Credit Transfer for Students From New Zealand Institutions ...***

- **Block or arranged** credit i.e. Guaranteed credit on commencement of a course of study on the basis of previous study
- Specified credit i.e. The process of transferring credits to a specified course within a different programme of study
- Unspecified credit i.e. The process of transferring credits for courses which are not part of the schedule of a qualification but which are judged to be relevant to the objectives of that qualification as a whole
- No credit but exemption and right to advance i.e. Exemption from a block of study with the right to advance to the next level on the basis of the accumulation of credits from previous study

*In Credit Accumulation systems, the main objective in most cases is the credit accumulation within the same institution whereas Credit Transfer systems primarily serve the transfer of academic credit from one institution to another in a national or international context.*

## 4. Credit Accumulation and Transfer Schemes.

The spread of a wider variety of programmes and their proliferation, led to increased student mobility. This made it critically important to evolve cogitative measures for transferable, quantitative units of educational accomplishment [15], resulting in the formation of Credit Accumulation and Transfer Schemes.

There are several regional and country-wide Credit Accumulation and Transfer Schemes (CATS) being used in the Universities of the world. There is no global CAT scheme in operation as at present. Ad-hoc arrangements as well as formal ones between Universities within countries have existed for long periods of time.

The CAT schemes have been in existence since the commencement of the use of credit as a measure of the volume of learning and they originated in North America, mainly to accommodate the two tiers of post secondary educational institutes which existed since the 1950s. The different tiers are the two-year Community Colleges and the four-year Universities. The USA has the largest higher education system in the world with about 4900 Universities and Community Colleges.

### 4.1 European Union

Driven by the movement for greater European integration, the European Union (EU) considered mechanisms to formally recognize and validate the academic achievements of its students not only in the completed higher education qualifications but also in parts of study programmes

The importance of education and educational co-operation in the development and strengthening of stable, peaceful and democratic societies is universally acknowledged as paramount and the European Union (EU) in the Sorbonne declaration of 25th of May 1998, stressed the universities' central role in developing European cultural dimensions [8]. While emphasising on the creation of the European area of higher education as a key way to promote citizens' mobility and employability and the region's overall development, the Declaration focused on improving the international transparency of courses and the recognition of qualifications by means

of gradual convergence towards a common framework of qualifications and cycles of study.

The Sorbonne Declaration led to the signing of the Bologna Declaration in June 1999 by ministers responsible for higher education in 29 European countries [6]. This latter Declaration became the primary document used by the signatory countries to establish the general framework for the modernisation and reform of European higher education. The resulting process of reform, called the Bologna Process, is the most important and wide ranging reform of higher education in Europe in recent times. It has put in motion a series of reforms needed to make European Higher Education more compatible, comparable, competitive and attractive for European students and for scholars from other continents [15].

The three priorities of the Bologna process are:

- Introduction of the three cycle system (bachelor/master/doctorate)
- Quality assurance
- Recognition of qualifications and periods of study

According to the findings of the Bologna Process stocktaking 2007 there has been good progress in the Bologna Process and that the outlook for achieving the goals of the Bologna Process by 2010 is promising, although there are some obstacles to be overcome .

### 4.2 European Credit Transfer System (ECTS)

The European Credit Transfer System (ECTS) was developed to provide a way of measuring and comparing learning achievements, and facilitating their transfer from one institution to another. Its aim was to make study programmes in Europe easier to read and compare [14].

ECTS was introduced in 1989 as a part of the ERASMUS framework[19]. The aim of the ERASMUS programme, established in 1987, was to encourage and support academic mobility of students and teachers in higher education institutions within

the European Union, the European Economic Area countries of Norway, Iceland and Liechtenstein as well as candidate countries (such as Turkey). It is the only credit system which has been successfully used across Europe. The ERASMUS Programme, together with a number of other independent programmes, was incorporated into the Socrates programme when that programme was established in 1995. The Socrates programme ended on 31st December 1999.

ECTS has clearly emerged as *the* European credit system with 46 countries following its general framework as at present. In most of those countries it has become a legal requirement while some other countries with national credits systems are ensuring their compatibility with ECTS [7].

### 4.3 Asia Pacific Region

**The University Mobility in Asia and the Pacific Credit Transfer Scheme (UCTS)**

University Mobility in Asia and the Pacific ( UMAP)[45], an organization comprising the countries and territories of the Asia Pacific region, has decided to adapt the ECTS model for its own university credit transfer schemes The UCTS was introduced in 1999 as a pilot scheme to assist in improving the recognition of study programmes in the UMAP institutions. It is currently used by Australian universities for student exchanges in the Asia-Pacific region.

The major components of the UCTS scheme are

- Staff, in the home and host institution, negotiating and overseeing the student study program;
- The student ;
- The UCTS Record of UMAP Study form;
- The UCTS credit point scale, for use as a conversion scale to record the student workload at the host institution in a form suitable for conversion to the home institution workload measure;

- The UCTS grading scale, for use as a conversion scale, to record host institution grades in a form suitable for conversion to home institution grades.

### 4.4 United Kingdom

In the United Kingdom, there are a number of CAT schemes[3,10,38] in operation namely, Southern England Consortium for Credit Accumulation and Transfer ( SEEC) , Northern Universities Consortium for Credit accumulation and Transfer ( NUCATS ) , Northern Ireland Credit Accumulation and Transfer Scheme ( NICATS ), the Scottish Credit Accumulation and Transfer Scheme ( SCOTCAT ) and Credit and Qualification Framework for Wales (CQFW )

NICATS (Northern Ireland CATS) is described as follows on their web page [29] :

A*t present NICATS is a credit system developed for Northern Ireland by a consortium of providers in further and higher education. Its primary purpose is to establish a workable system for recognising and comparing learning achievement within Northern Ireland. The system used is, however, identical to that proposed by the various consortia of higher education institutions operating throughout the UK. In this way it is fully readable and transferable within the UK system* .

Like the NICATS, the other regional CAT schemes in the UK, though established primarily to cater to the collection of universities in their particular region, are almost identical and are fully transferable within the UK.

All of the above entities aspire to establish common frameworks and approaches between consortium members and eventually to achieve increased volumes of credit transfer. Fundamentally, the approach of all these groups is similar but they differ in such details as the number of credits in a year or in a Bachelor degree programme and the qualifications ladder.

### 4.5 Latin American Countries

SICA and CAT are new tools that have been developed to help create a common academic credit system in Latin America.

SICA stands for Sistema de Creditos Academicos (System for Academic Credits) and CAT is an abbreviation for Complemento al Titulo (Complement to the Title). Both of these tools are part of the 6x4 UEALC (European Union and Latin America and the Caribbean Common Space for Higher Education) project—a "bottom-up initiative" of higher education institutions and organizations from across Latin America.

Project 6x4 UEALC is a specific project that sought to analyze six professions in four axes with the aim of proposing operating conditions that foster greater consistency and convergence of higher education systems in Latin America and the Caribbean and their comparison with those of rapprochement and the European Union.

The project's four major areas of work include the creation of

- Strategies to describe and evaluate competency-based learning
- A region wide academic credit system
- A common reference framework for integrating the evaluation of competencies into quality assurance and accreditation systems, and
- A list of key competencies for research and innovation and related training strategies.

The basic concept of SICA is based on the total amount of work that a student completes during a specific academic period in order to achieve the learning objectives and outcomes. A fundamental assumption is that an academic credit measures all of the work the student has completed including contact teaching hours with an instructor in classes, seminars, laboratories, or field work, as well independent study time in the library, group or individual work, and preparation for exams.

*CAT—Complemento al Titulo* is a document that provides data on the student; the name, level, and function of the qualification; the results obtained, the program of

study, and the institution that is awarding the qualification and/or where the studies took place.

The intended purpose of CAT is to increase the transparency and comparability of different qualifications within and between countries in Latin America and to expedite the recognition of qualifications for further academic studies and/or professional purposes.

In summary, a Credit Accumulation and Transfer Scheme broadly encompasses [15]

- A set of agreed specifications and procedures for mutual recognition of achievement or learning between different partners;
- The recognition of the autonomy of partner institutions in accreditation, delivery and awarding processes;
- A concept of mutual recognition that places an obligation on organisations to be prepared to recognise and accept the credits awarded by all other member institutions, provided that transferred credit represents learning that is relevant, at the appropriate level and matches the learning outcomes of the destination programme;
- A facility enabling learners to accumulate credit and transfer it from the credit-awarding institution(s) to another institution where a desired award can be gained.

## 5. Articulation between different schemes

There is *articulation* between ECTS and the CAT schemes operative in the UK. Articulation is described as follows [32].

*When students move from one institution to another, it is their expectation that relevant modules that they have previously completed will be applicable to fulfilling programme requirements at their new institution. In order for this expectation to be*

*met, it is necessary that there be comparability and compatibility between curricula at the various institutions, a process known as articulation.*

The objectives of articulation are to assure that

- The student seeking a transfer is in a position to continue studies at the new institution;
- A qualification earned through study at two or more institutions within the system is comparable to a qualification earned through study at a single institution;
- The process of moving from one institution to another works smoothly for the student.

At present the ECTS simply reports on the volume of learning completed by a student. It provides a common and readily understood currency for this and relies on negotiation between home and host universities that have exchange agreements to decide whether or not to give the student credit for earlier achievements at the home university. It is clear that the host institution has to consider other factors such as the standard of achievement i.e. The grade obtained before a decision is made.

The ECTS is entirely input focused at present, in common with other CAT systems and is a measure of the time spent studying, taking no account of outcomes or outputs.

This has posed a problem for the UK, where a Bachelor degree is typically of three years duration and a Master degree is one year. A purely workload based or time based approach would raise questions whether degrees awarded by British universities are comparable with those being introduced elsewhere in the EU where five years will normally be required to complete a Masters degree (from the commencement of undergraduate studies) as against the four years in British universities. The UK has therefore argued that credit should be awarded not against the amount of time served, but in recognition of outcomes achieved. This is increasingly accepted within the EU, where efforts are now in progress to try to combine an element of outcomes as well as time in the ECTS. In this context, a

course module needs to be specified by the learning outcomes and the assessment criteria [22,42,43] in addition to other parameters.

Given that credits, almost universally, are a measure of time, the above developments have two implications. One is that it necessitates a description of outcomes for each programme of study and its constituent modules and the other is that it implies simply that students in the UK can achieve those outcomes in a shorter space of elapsed time than students elsewhere. Or, in the language of credits, this second implication suggests that UK students can fit more notional minutes in an actual hour than students in other countries [2].

Both these implications appear to be problematic. Describing meaningful learning outcomes is something that has eluded those who have made the attempt in the past in all but the most vocational subjects (in vocational subjects, the common requirements that are often set by outside bodies such as the institutes of engineering or the medical council make this less difficult). It is increasingly recognised that without comparable curricula, meaningful outcomes will not be described, and if that is the case, then the development and description of useful learning outcomes are unlikely to occur [2].

The second implication, that students in UK might achieve a certain endpoint after four years whereas students in other countries may have to wait for five years to achieve the same endpoint , while difficult presentationally, is entirely plausible. It has to stated however that the rigid standards of student achievement (entry requirements) needed to enter UK universities do play a major part in determining and describing the learning outcomes of programmes of study and consequently, the duration of the Bachelor Degree progrmmes.

# CHAPTER 2

# STUDENT-CENTRED AND OUTPUT-ORIENTED PROGRAMMES OF STUDIES

## 1 Student-centred and output-oriented versus teacher-centred and input-oriented programmes of studies

Educational systems can be described as being more teacher-centred and input-oriented or more student-centred and output-oriented. The former approach is generally time independent, based on the assumption that the proper object of study is what the individual teacher thinks the student should learn in the module delivered by him or her. The latter approach gives greater weight to the design of the overall curriculum and focuses especially on the usefulness of study programmes for a future position of the graduate in society[22,42,43].

In the past, educational practice has been to teach students increments of prescribed subject matter, the traditional curriculum, in the hope of instilling and retaining that knowledge

When designing a module, traditionally teachers start from the content of the module they intend to teach and then decide how it is to be taught and assessed focus was on what the teacher did, and goals were implicitly included in the content of the module.

Current models of higher education, however, place the learner at the centre of the teaching and learning process and require that modules be described in terms of what it is that the students should be able to do when they have completed that module.

Any programme of studies leading to an award must develop specific competences, that is, knowledge, skills, abilities and values, specifically needed for

the subject area and choices will have to be made about which competences are most relevant for its students for which proper learning/teaching/assessment activities must be organized. Fostering competences is the object of educational programmes.

The Tuning project[42,43] has drawn attention to the importance of competences as the basis for the design, implementation and delivery of study programmes

The statements, which describe what it is the students should be able to do after completing the module, are called *intended learning outcomes* or *learning outcomes* for short. They describe the achievements of learners in terms of the knowledge, understanding and skills.

## 2 Learning Outcomes

Learning Outcomes [42] may be defined as

*"Statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning. When used in association with their related assessment criteria, learning outcomes reflect the level at which the learning has occurred"*

With respect to this latter approach, a correct allocation of credits as well as a proper statement of learning outcomes plays a crucial role. Student workload is acknowledged to be an important factor and educators recognise that there is a tension between what a student should learn and what he/ she is able to learn, in a given period of time.

### 2.1 Role of Desired Learning Outcomes

Competences represent a dynamic combination of knowledge, understanding, skills and abilities.

By designing programmes in this way, more transparency and coherence can be achieved and the approach has made it possible to develop cumulative programmes, with specific entry requirements for each of the study year levels

According to the Tuning methodology learning outcomes should be expressed in terms of competences. As stated earlier, credits serve to measure and assess the equivalence of learning and help to define standards of qualifications and in the recognition of modules or programmes of study

According to Tuning, Learning outcomes can be broadly divided into the following two categories:

- Generic competences (transferable skills)
- Subject specific competences (theoretical, practical and/or experimental knowledge and subject related skills)

In the first category, consideration is given to such matters as the capacity for analysis and synthesis, general knowledge, capacity for independent learning, co-operation and communication In other words, reference is made to qualities which are of use in many situations, not only those related to the specific subject area.

The second category includes the subject related theoretical, practical and/or experimental knowledge comprising the actual contents of the module or, in other words, specific factual knowledge relating to it and ways in which problems are approached and solved.

When formulating desired learning outcomes or competences, special attention should be paid to avoid the inclusion of inappropriate learning outcomes (e.g. too much detailed coverage of a topic). After the desired learning outcomes have been formulated, the next step should be to decide on the time required to reach each of these learning outcomes. This must be based on the estimate of what a typical student can do in a certain amount of time.

## 2.2 The Importance of Learning Outcomes in Establishing Programme Equivalence.

The use of Learning Outcomes in describing programmes and individual modules helps to establish programme equivalence, not only in terms of the contents of modules but also in terms of both the volume and the level of those contents.

Any programme of studies leading to an award must develop specific competences, that is, knowledge, skills, abilities and values, specifically needed for the subject area and choices will have to be made about which competences are most relevant for its students for which proper learning/teaching/assessment activities must be organized.

Assessment should be the crucial tool for determining whether or not a programme is successful, that is, in assessing the extent to which the learner has actually achieved the planned goals or competences. Assessment must be conceptualised and organised in such a way as to evaluate to what extent those competences have been achieved.

## 2.3 Comparability and Compatibility

Bachelor's or Master's degree programmes must be compatible and comparable with similar programmes elsewhere, through the use of common reference points, jointly agreed and expressed in related competences. This methodology allows for true comparability, while showing a clear respect for the diversity of curricula and paths of learning.

# 3 Outcome-Based Education

*It is important to understand that outcome-based education is about providing unambiguous statements of learning intent. These explicit statements serve to ensure that the educational processes are designed to achieve the required outcomes. Education within such a framework permits flexibility of delivery, allowing*

*individual institutions to generate the methods by which the outcomes are achieved, without requiring rigid adherence to a set of standard teaching methods*[43].

The literature on why and how an outcomes-based approach has been applied increasingly in universities is extensive. This literature brings forward four basic principles:

- Clarity of focus (a clear focus on what the students are expected to achieve as a result of their studies);
- Mapping back (constructing the curriculum by backward mapping from these outcomes to the knowledge and skills required to achieve them);
- High expectations (challenging students to achieve increasing standards in relation to these outcomes) ;
- Expanded opportunities (providing a range of strategies that ensure all students do achieve).

## 3.1 Differences between Learning Outcomes, Aims and Objectives

Aims are written in terms of teaching intention and indicate what it is that the teacher intends to cover in the block of learning (curriculum coverage) whereas Learning Outcomes are descriptions of what the learner is expected to learn in the period of learning defined. They should imply the standard of learning expected. Aims are therefore more about teaching while however, the management of learning and learning outcomes is more about learning.

Objectives do complicate the situation. They may be written in the terms of teaching intention or expected learning outcomes. Objectives that are called 'behavioural' or 'learning objectives' are more likely to be written in learning outcome format. This complication may be a reason for abandoning the use of the term 'objectives' in the description of modules or programmes.

Since learning outcomes and aims have different functions, it is perhaps useful to write an aim for a module, in addition to learning outcomes. An aim can be a statement of general teaching intention and coverage while at the same time

indicating the content of the module and its relationship to other learning. In effect, an aim provides direction**.**

## 4 Learning Outcomes and Assessment

All learning outcomes should be assessable, in other words they should be written in terms that enable testing of whether or not the student has achieved the expected outcome. In general terms,

*An assessment criterion is a statement that prescribes with greater precision than a learning outcome, the quality of performance that will show that the student has reached a particular standard. The standard may be the threshold that is described by the learning outcome or the standard that is required in order to gain a particular grade*[42]*.*

It is perhaps worth mentioning the distinction between assessment *criteria* and assessment *methods and tasks.*

While assessment methods are the tasks undertaken by a student which are subject to assessment, assessment criteria are the basis upon which a judgment of the adequacy of the work is made. There are many different ways to present assessment criteria, unlike learning outcomes.

### 4.1 Assessment Criteria

Assessment criteria can be defined as what a student must do to demonstrate that the learning outcome has been achieved. Thus the assessment criteria and learning outcomes are inextricably intertwined. It enables a judgment to be made.

Once the assessment criteria have been defined it is possible to use a range of different methods to enable the students to demonstrate that the criteria have been met.

It is thus more rational and effective to define the learning outcomes and assessment criteria first and then to design the assessment method or task.

A clear formulation of the assessment criteria, based on the learning outcomes, can lead to the development of assessment methods which are streamlined to the particular criteria under consideration. Assessment can thus become more efficient and effective and the student is not asked to perform tasks that do not test specific criteria. Assessment criteria ought not to be confused with the weightings assigned to different aspects of the evaluation process.

# CHAPTER 3

## ANALYSIS

### 1. Introduction

The principal aim of this work is to formulate a Credit Accumulation and Transfer Scheme which would facilitate the mutual recognition of credits and qualifications. and which would contribute towards enhancement of the quality of higher education through a common and transparent system for the measurement and expression of the academic work and learning outcomes achieved by a student in a programme of studies. Such a scheme should take SLQCF as the basis and evolve round the particular needs and characteristics of higher education institutions and the national education system in Sri Lanka. Concurrently, it must include the common features of Credit Accumulation and Transfer Schemes such as ECTS, UCTS; SCOTCAT.NICATS; and SEEC, successfully operative at regional, national and sub-national levels respectively, so that it could help in promoting collaboration and student mobility with higher education institutions in Sri Lanka as well as in other regions of the world.

The first step in the analysis was to compare the existing Credit Accumulation and Transfer Schemes successfully operated at regional, national, sub national and institutional levels.

After an information gathering process, common items that contribute towards successful implementation of Credit Accumulation and Transfer Schemes were identified.

In this regard, the following were given detailed consideration.

- **Programme structure and content** embodying topics such as the role of Credits, allocation of Credits to programmes and modules, methods of calculating workload, calculation of Credits in terms of workload, distribution of Credits, Credits and their levels;

- **Student-oriented versus teacher-oriented programmes of studies,** concentrating on items such as Learning outcomes and Competences, relevance of Learning outcomes and assessments, role of desired Learning Outcomes, Tuning Methodology. the difference between Learning outcomes, Aims and Objectives;
- **Assessment** comprising Assessment Criteria **and** Grading, Assessment Criteria and Assessment Methods;
- **The student mobility** including the definition of a Credit Transfer(CT) Scheme, Characteristics of National CT Schemes, Constituents of a CT Scheme, Grade Transfer and Compatible Credit Systems.

## 2. Programme structure and Content

### 2.1 Structure of University Academic Programmes

The academic curriculum of Sri Lankan universities is organized into programmes of study and each programme leads to a named award of the University. Students are admitted to a programme and remain enrolled in that programme unless they are permitted to change their enrolment.

The basic building blocks of a programme are designated Modules which students must successfully complete in order to earn the award.

The intention of any credit accumulation and transfer scheme must be to come up with mechanisms that would make it possible to compare periods of academic studies of different universities. Such an instrument is necessary to accord recognition to studies completed elsewhere.

A high quality system of education must guarantee full recognition of periods of studies and degrees, as well as the appropriateness for the student of the activities undertaken at the institution.

If a university is to make it possible to guarantee full recognition and acceptance by outside parties or institutions, of the programmes of studies and qualifications awarded on their successful completion, the programme structure and content as well as the quality and standard of its awards are of paramount importance.

For a high quality programme of studies, the curricula must:

- be current, coherent, flexible, accessible and responsive to needs of students;
- encourage and stimulate learners to participate and provide opportunities for them to achieve their full potential;
- provide opportunities for students to develop knowledge, understanding and competencies to the required level.

The management, establishment, maintenance and assurance of the academic standards of its programmes are essential to the integrity of the University's awards. Regrettably there are no Benchmarks for establishment of new Universities, Faculties, Departments of study and programmes of study.

In this context, the Sri Lankan Universities already have a system of Quality Assurance for the development of a quality culture and to monitor the on going programmes. Once all the building blocks of Quality Assurance mechanisms in the university sector are in place, the monitoring of the existing programmes and of the development of new programmes of study can be conducted in a manner which is coherent with core academic values and with their specific mission.

It is within a subject-area that the level of academic development of a programme can be best understood and measured in terms of quantity as well as quality. In this regard, it is obvious that there should be a clear understanding of the concepts connected to modules, Credits, learning and assessment. The availability of subject Benchmarks statements can make a very useful contribution in this connection,

Mobility and accompanying academic recognition are assumed to be necessary prerequisites for an open and dynamic educational system. However, for students to be mobile they must have continued access to higher education to enable them to continue their studies. If a student is to continue her/his education at the same institution or in a different one, there must be some mechanisms to recognise the prior learning. This is where the usefulness of Academic Credit Accumulation and Transfer comes in.

### 3. Requirements of CTS

Universities are required to attach credits to constituent modules of programmes of study in a consistent way. The system should address the issue of providing assurance to other institutions about the quality and standards of the institution where a student seeking a transfer studied.

A credit accumulation and transfer system is most likely to be successful if it possesses a set of agreed specifications containing essential ingredients and easily implementable procedures, which facilitate learners to accumulate and transfer Credits.

### 3.1 Transfer of Grades

Grading is an essential part of the learning process and is necessary for the smooth transfer of grades from one institution to another.

In the framework of ECTS a grading scale has been developed to facilitate the understanding and comparison of grades given according to different national systems.

It has no national reference point and aims at an objective evaluation. It has not been designed to replace national systems, but to enhance the understanding of them in other countries.

The ECTS grading scale is based on the rank of a student in a given assessment, in which he/she performed relative to other students. The ECTS system classifies students into broad groups and thus makes interpretation of ranking simpler. It is the grouping hat lies at the heart of the ECTS grading system.

The ECS system initially divides students between pass and fail groups, and the assesses the performed of these two groups separately. Those obtaining passing grades are divided into five subgroups: the best 10% are awarded an A-grade, the next 25% a B-grade, the following 30% a C-grade, the following 25% D-grade and he final 10% an E-grade.

The use of words like “excellent” or good is no longer recommended as they do not fit with percentage based ranking of the ECTS Grade Transfer Scale.

Those who have not achieved a performance sufficient to allow a passing grade are divided into two subgroups:

- FX (Fail i.e. Some more work required before credit can be awarded)
- F (Fail i.e. Considerable further work is required).

This distinction allows differentiation between those students who have been assessed as almost passing and those who have clearly lacked the required knowledge and skills.

The ECTS grading scale can be represented in tabular fashion

| ECTS Grade | % of successful students normally achieving the grade | Comments |
|---|---|---|
| A | 10 | |
| B | 25 | |
| C | 30 | |
| D | 25 | |
| E | 10 | |
| FX | -- | Fail – *some work required to pass* |
| F | -- | Fail – *considerable further work required* |

### 3.2 Learning Pathways

A learning pathway is *a path or sequence of learning or experience that can be followed to attain competency.*

New Skills online Glossary https://www.skillsonline.net.au/**glossary**.html

It is the intended route by which a learner expects to acquire the experience and learning necessary to qualify for the award

In cases where there are electives in a programme of study, It is important that clearly defined learning pathways be formulated for each award granted by a university

### 4. Conclusions

In many parts of the world, 'the European reform model' mentioned earlier, has created considerable interest and has a strong and growing appeal , as described in Professor Pavel Zgaga's report on the External Dimension of the Bologna Process. In some countries, it has even been debated if 'Bologna' or Bologna-like reforms should be adopted in the context of domestic higher education reform processes, and whether 'Bologna' should be used to establish convergence at a regional (supranational) level. The Bologna Process has also stimulated a discussion between European and international partners about mutual recognition of qualifications. It has been a key factor in the development of modern day higher education in many countries.

The strength of the Bologna Process is the voluntary cooperation of 45 countries to create a European Higher Education Area by converging important structural features of their national systems of higher education.

## 5. Quantum of credits to be accumulated at each level

### 5.1Number of Credits for University Awards

There should be a minimum number of credits that students are required to earn for each award. These minimums as indicated in the SLCQF are as follows:

| Award | Number of Credits |
|---|---|
| Undergraduate Certificate | 30 |
| Undergraduate Diploma | 60 |
| Bachelor (General ) Degree | 90 |
| Bachelor (Special ) Degree | 120 |
| Postgraduate Certificate | 30 (12*) |
| Postgraduate Diploma | 30 (24*) |
| Master's Degree | 30* |

* Credit should be at the postgraduate level.

No upper limits for Credits required have been set but full-time students are not normally allowed to accumulate more than 18 credits per Semester.

### 5.2 Time Elapsed Since Previous Study

Credit transfer has to be time bound. Normally, credit transfer applications for study completed within the last 5 years are considered automatically. However, in certain institutions, a longer period may be applied for specified qualifications and applications will are considered on a case-by-case basis.

## 6. Consultation Exercise

In order to gather information regarding the types of credit in use, the availability of learning outcomes, assessment criteria and details in respect of other related

matters, a Questionnaire (Appendix 1) was circulated among the Sri Lankan universities.

### 6.1 The Universities that responded to the Questionnaire

The Universities that responded to the Questionnaire are given below.

University of Colombo

University of Kelaniya

University of Mortuwa

Rajarata University of Sri Lanka

University of Ruhuna

University of Visual and Performing Arts

### 6.2 Summary of the responses

Summary of the responses received are given in tabular form.

#### 6.2.1 Universities that have adopted Carnegie Credit

| **UNIVERSITY** | **LEVEL** | |
|---|---|---|
| | **Undergraduate** | **Postgraduate** |
| | **Campus/Faculties** | **Faculties** |
| COLOMBO | Sri Palee Campus | |
| KELANIYA | Commerce and Management Studies | |
| | Humanities | |
| | Science | |
| | Social Sciences | |
| | Architecture | Engineering |
| | Engineering | |

| | | |
|---|---|---|
| MORATUWA | Information Technology | Information Technology |
| RAJARATA | Agriculture | |
| | Applied Science | Applied Science |
| | Management Studies | Management Studies |
| | Social Science and Humanities | |
| RUHUNA | Agriculture | Agriculture |
| | Humanities and Social Science | |
| VISUAL AND PERFORMING ARTS | | |

### 6.2.2 Universities that have adopted Credit rating based on 'notional study hours'

| **University** | **LEVEL** | |
|---|---|---|
| | **Undergraduate** | **Postgraduate** |
| | **Campus/Faculties** | **Faculties** |
| COLOMBO | Sri Palee Campus | |
| RAJARATA | Management Studies | Management Studies |
| RUHUNA | Agriculture | Agriculture |

### 6.2.3 Universities where Assessment Criteria exist

| **University** | **Campus/Faculties** |
|---|---|
| COLOMBO | Sri Palee Campus (02) |
| | Arts (08) |
| KELANIYA | |

| | |
|---|---|
| MORATUWA | Architecture (05) |
| | Engineering (All) |
| | Information Technology (03) |
| RAJARTA | Applied Science (8 subjects) |
| | Management studies (04) Programmes |
| | Medical & Allied Science |
| | Social Science & Humanities (06) |
| RUHUNA | Humanities & Social Sciences 102 BA (General) & 132 BA (Special) |
| VISUAL PERFORMING ARTS | 03 |

### 6.2.6 Universities where Learning outcomes are available

| **UNIVERSITIES** | **LEVEL** | | | |
|---|---|---|---|---|
| | **Institutional** | **Programme** | **Discipline** | **Module** |
| | | **Faculties** | **Campus/Faculties** | **Faculties** |
| COLOMBO | | Arts<br>Bachelor (General) Degree (01)<br>Bachelor (Special) Degree (07) | Sri Palee Campus (02) | |
| KELANIYA | | | | |
| MORATUWA | | Architecture (05) | Architecture (05) | |
| | | Engineering (All) | Engineering(10) | |
| | | Information Technology | Information Technology (01) | |
| | | Agriculture | Agriculture (All) | |
| | | Applied Science | Applied Science (08) | |

| | | | | |
|---|---|---|---|---|
| RAJARATA | | Management studies | | |
| | | Social Science and Humanities | Social Science and Humanities (06) | |
| RUHUNA | | Agriculture | Agriculture (07) | |
| VISUAL AND PERFORMAING ARS | Under preparation | | | |

### 6.2.5 The Faculties that have adapted different credit ratings

The Faculty of Arts of the University of Colombo has a modularized system with all the modules comprising a uniform number of lecture hours (45)/ discussion hours (15), within a bi-semester academic year and end-semester examination (The volume of learning is expressed not in terms of credits, but in terms of contact hours).

### 6.2.6 The Universities which accord recognition to credits earned elsewhere

#### (a) At Undergraduate Level

At the University of Moratuwa there is a CT system in the faculty of Architecture but other faculties there are yet to implement one. The other universities have no CT system in operation

#### (b) At postgraduate Level

No CT Schemes in Operation

# CHAPTER 4

## PROPOSED CAT SCHEME FOR THE SRI LANKAN UNIVERSITY SECTOR

This is a proposal to formally establish a Credit Accumulation and Transfer Scheme (CATS) among the Sri Lankan Universities in order to provide more extensive and fairer opportunities for student mobility within the sector.

### 1. Background

Sri Lankan Credit and Qualification Framework (SLCQF) formulated in October 2004 as a part of the Quality Assurance Project in the University sector, provides minimum volumes of learning and levels of learning in respect of qualification awarded by the universities. It also provides for lateral entry to and lateral exit from programmes of study. Further, it contains Qualification level descriptors and Credit level descriptors.

The proposal has been formulated taking cognizance of, among others, the responses to a questionnaire circulated in the university sector. The responses revealed whilst learning outcomes and assessment criteria exist in respect of the constituent modules pertaining to some programmes of study, they do not exist in the case of a majority of programmes. It is heartening to note that learning outcomes exist at institutional and qualification levels in a few universities. Variations in structural aspects of the programmes as well as the non-existence of learning outcomes and assessment criteria stand as major impediments to the implementation of a just and fair student mobility scheme. Thus, there is a need to introduce a more uniform system not only in terms of programme structures, volumes and levels of learning but also regarding the availability of learning outcomes and assessment criteria.

### 2. Basic Premises

Before getting down to the details of the proposed CAT scheme, it is necessary to lay down several principles with regard to the student mobility scheme that is expected to emerge as an outcome of the CATS.

- To begin with a student will need to register herself/himself for a Bachelor Degree programme in a university, as is the current practice. The university in which the student registers is her/his 'Home university'.
- The facility of moving from the Home university to another university ('Host university') or to the 'World of work' will not become available to a student before the completion of one year of studies at the Home university and the decision to allow a student to use this facility will depend on his/her performance at the Home university and the choice of a suitable porgramme of study offered by the potential Host university. The facility of spending a period in the World of work depends on the relevance of experience due to be gained by the student during the period for achieving the qualification for which he / she is aspiring.
- The qualification will be awarded by the Home University or the Host University depending on where the student earned the greater proportion of Credits. For this purpose, any Grades earned at one university will, if deemed necessary due to differences in the grading systems of the two universities, be converted to the grading system of the university that will finally award the qualification. The mechanics of the transfer of grades will be dealt with later in the chapter.
- This scheme shall be implemented in the true spirit of a student mobility programme meant to give more able students and the late developers a better chance of self actualization and shall in no way be a means of circumventing the regulations governing the initial allocation of students to the various universities and to the various faculties within each university;
- It will always be up to the host university to decide whether or not to accept an individual student for entry. Even if common systems are developed, universities may want to exercise care in making decisions about the admission of individual students.

It is apparent that the conditions embodied in the above principles can be met, to a limited extent, even under the present state in the university system and hence student mobility is possible even now and has sometimes been practiced. However, it would involve the interpretation, by one university, of such things as the workload undertaken and the grades earned at another university. The adoption of a uniform system of structuring programmes and grading achievement, as detailed in Section 3, will avoid the need for such problematical interpretations.

A scheme of interpretation applicable to the present situation is given in Section 4.

## 3. Proposed Common Credit Currency for Sri Lankan Universities

As the first step universities need to achieve consensus on the following parameters:

(i) the definition of a Credit;

(ii) the respective academic workloads for 3-year and 4-year Bachelor Degree programmes;

(iii) the Grading System, i.e. the grades, corresponding marks ranges and the grade points;

(iv) the definition of different pass levels (i.e. the 'Classes') in terms of Grade Point Averages.

A study of the different programme structures prevalent in the various universities reveals a great deal of overlapping features and suggests a possibility of moving into a common system without much complication. The following system is proposed for consideration.

### 3.1 Definition of Credit

*Modules with lectures only*

1 Credit = 15 contact hours

*Modules with laboratory work only*

1 Credit = 45 hours of laboratory work

*Modules with both lectures and laboratory work*

1 Credit = 10 lecture hours + 15 hours of laboratory work

### 3.2 Workload

Total number of credits for a 3-year Bachelor Degree programme = 90

Total number of credits for a 4-year Bachelor Degree programme = 120

Total number of credits for a 1-year Master Degree programme = 30*

(* These credits should be at the postgraduate level)

### 3.3 Grading System

| Marks Range | Grade | Grade Point |
|---|---|---|
| 80 – 100 | A | 4.00 |
| 70 – 79 | A- | 3.75 |
| 60 – 69 | B | 3.50 |
| 50 – 59 | B- | 3.00 |
| 40 – 49 | C | 2.00 |
| 25 - 39 | D | 1.00 |
| 0 – 24 | F | 0 |

### 3.4 Pass Levels

| | |
|---|---|
| First Class - | GPA ≥ 3.75 |
| Second Class (Upper Division) - | GPA ≥ 3.50 |
| Second Class (Lower Division) - | GPA ≥ 3.00 |
| Pass - | GPA ≥ 2.00 |

## 4. Two Structural Types of Bachelor/Master Degree Programmes of Studies

The two major structural varieties adopted by the universities in Sri Lanka presently are:

(a) The modularised Credit based system within a with end-semester examinations, the unit of credit being the Carnegie credit;

(b) The modularised system with all the modules carrying a uniform number of lecture hours/ discussion hours, within a Bi-semester academic year and end-semester examinations (the volume of learning is expressed not in terms of credits but in terms of contact hours).

Until such time that a uniform programme structure and a common grading system are adopted across the universities providing for student mobility will involve the interpretation of the workload undertaken and the achievement of grades at one university in terms of the parameters prevailing at another university. The interpretation of the workload would be done through the use of a conversion scheme that employs the common credit currency proposed in Section 3, as a hypothetical standard. This scheme may be called Sri Lankan Credit Accumulation and Transfer Scheme (SLCATS). The essential features of SLCATS would be as follows:

- SLCATS Credits are numerical values (between 1 and 12 ) allocated to modules as a measure of student workload.

- In SLCATS, 30 Credits represent a full time student's minimum workload during an academic year and for one semester's full- time study, SLCATS Credits would total 15.
- A student's workload is the total volume of work required for completion of a full academic year

### 4.1 Conversion Scheme

Provision of student mobility would involve the interpretation of the workload undertaken and the achieved grades for a module at the one university, in terms of the parameters prevailing at another university, until a uniform module structure and a common grading system are adopted by all the universities.
Given below is an example of converting student achievement at one university into the framework of another university

Assume that the University X is characterized by the following:

- a modularized credit based system
- workload for an academic year being 30 Carnegie credits.

Assume that the University Y is characterized by the following:

- a modularized system with modules comprising a uniform number of lecturer hours, say 45;
- workload for a academic year being 360 hours of lectures.

Suppose a student from University X is permitted to spend one academic year at University Y. How will the Home University interpret the workload? The interpretation would be done as follows.

| Module | Host University | SLCATS measure | Home University |
|---|---|---|---|
| M1 | 45 hrs | 3 | 3 |
| M2 | 45 hrs | 3 | 3 |
| M3 | 45 hrs | 3 | 3 |
| M4 | 90 hrs | 6 | 6 |
| M5 | 90 hrs | 6 | 6 |
| M6 | 45 hrs | 3 | 3 |
| Total | 360 hrs | 24 | 24 |

Formula to convert Host University workload to SLCATS for each module is measure of workload X 24/360.

Column 3 and column 4 are identical as the Home University has adapted the SLCATS workload of 30 Carnegie credits per academic year.

### 4.2 Transfer of Grades

In order to facilitate transfer of grades from one institution to another, it is necessary for the home institution to provide the host not only the grades and the raw marks pertaining to the student requesting a transfer but also the raw marks of all the candidates who sat the relevant module examinations concurrently. This would enable the host institution to ascertain the position of the applicant in relation to the others.

## 5. Pre-requisites for successful implementation of a CAT Scheme

In order to facilitate the smooth functioning of a Credit Accumulation and Transfer Scheme in the University Sector in Sri Lanka, it is necessary to create conditions conducive for the participating institutions to work on the basis of mutual trust. For this purpose, the following pre-requisites are essential:

- Synchronisation of the academic year within the Sri Lankan University Sector;
- Implementation of the Sri Lanka Credit and Qualification Framework (SLCQF) formulated in 2004;
- Implementation of the codes of practice contained in the Academic Procedures Handbook;
- Formulation of the subject Benchmark statements in respect of the entire spectrum of subjects taught in the Sri Lankan universities;
- Formulation of Learning Outcomes at national, programme and module levels;
- Formulation of Assessment Criteria in respect of constituent modules of programmes of study;
- Preparation of codes of practice required for Accreditation of Prior Learning (APL) and for Accreditation of Prior and Experiential Learning (APEL);
- Appointment of Adjunct academic staff from the world of work;
- Revival of the role of external examiners for all university examinations;
- The use of the outcomes-based approach in the preparation of curricula.

The setting up of about four dozen Inter-University Subject Committees is about to be effected by the UGC. The provision of proper training to the Chair-persons of those committees would expedite the preparation of items 4, 5 and 6. This would enable the Chair-persons to act as senior trainers and provide the necessary training to the other members of the Subject Committees in the preparation of those items.

New demands have been brought about by the emergence of Life Long Learning (LLL) as opposed to the front end loaded system of education. The formulation of a

CAT Scheme can contribute towards facilitation of LLL as well as the enhancement of access to higher education. CAT Schemes can prepare the necessary background for the employment of dual mode delivery in the traditional universities, thereby enhancing the access to higher education.

The mechanisms required tom facilitate a CAT Scheme will also contribute towards the enhancement of Quality Assurance activities in the university sector.

## 6. The benefits of a Credit Accumulation and Transfer Scheme for Sri Lankan Universities

The credit-based modular structure operative in the Sri Lankan Universities provides for inter-Faculty mobility within a university. The setting up of a Credit Accumulation and Transfer Scheme (CAT scheme) would make it possible for inter-university mobility of students, a situation where credits earned at one university are recognised by other universities. This would enable students to meet special academic needs , e.g. a student who shows promise in a discipline which is not available for pursuance at the Bachelor (Special ) degree level in the university he/she is attached to may be allowed to move into a university where the facility is available. This sort of arrangement would also create room for breaking away from the rigid time schedules of university programmes of study by allowing students ( those who need to do so ) to accumulate credits over longer periods. Such a student may even choose to learn under different delivery modes during different stages of the academic career

Once a CAT scheme is operative, a variety of acceptable credit accumulation patterns for earning awards can be determined by prescribing progressive sequences of modules. Such sequences of modules need not necessarily take an upward vertical path along separate disciplines, but may cut across disciplines. Such an approach to giving academic awards would facilitate the development of

programmes of study that transcend the traditional subject boundaries, to match the demands of the emerging employment profiles. An additional advantage of adopting a CAT Scheme is that it would make it easier for a University to franchise a programme of study developed by another university. This may become useful when a university lacks the necessary staff to prepare its own programme of study.

A Credit Accumulation and Transfer Scheme will also help in eliminating duplication of learning and effort which not only demoralises learners but also wastes resources. Further, it will assist learners who do not want a full national qualification to access small chunks of learning in relevant fields at levels, times and locations suited to them. The credit awarded for these small chunks of learning will be recorded or

banked for consideration at a later time, when sufficient credit is accumulated to progress towards nationally recognised awards.

## Recommendations

1. Speedy implementation of the Sri Lankan Credit and Qualification Framework (SLCQF).

2. Extension of the SLCQF to cover the qualifications awarded by the institutions providing post GCE(A/L) training.

3. Formulation of an overarching Credit Accumulation and Transfer Scheme encompassing all institutions providing post GCE (A/L) training, including universities, in order to facilitate student progression from the former type of institutions to the latter.

4. The use of the outcome-based approach when developing new programmes of study and in revising existing programmes.

5. Preparation of learning outcomes at national, institutional, programme and module levels.

6. Preparation of learning outcomes at national, institutional, programme and module levels.

6. Preparation of assessment criteria in respect of constituent modules of programmes of study.

7. Preparation of coded of practice for Accreditation of Prior Learning )APL) and Accreditation of Prior and experiential Learning (APEL).

# Appendix 1

## Questionnaire to ascertain the practice of credit related issues in the Universities

1. Name of the university…….

2. Has your institute adopted the **Carnegie Credit** ( one credit based on 15 contact hours for theory modules and one credit based on 30- 45 hours for laboratory modules ) ?

(a) at *undergraduate level* **yes/no**

If the answer is no, what is the credit rating in use ?

.....

Is the credit rating based on " notional study hours " ? **yes/no**

(b) at *postgraduate level* **yes / no**

If the answer is no, what is the credit rating in use?

.....

Is the credit rating based on "notional study hours" ? **yes/no**

3. Do the **learning outcomes** exist in your institute at the following levels ?

(a) *module* **yes/no**

If yes, the number of disciplines concerned .....

(b) *programme* **yes/no**

If yes, the number of programmes concerned .. .....

(c) i*nstitutional* **yes/no**

4. Do the ***assessment criteria*** exist in respect of constituent modules of programmes of study

conducted by your institute? **yes/no**

If yes, the number of programmes concerned.

.....

5. Does your institute have a ceiling for credits imported into the following awards?

(a) *undergraduate awards* **yes/no**

Please describe, stating whether it is the same for all undergraduate awards

.....
...

(b) *postgraduate awards* **yes/no**

Please describe , stating whether it is the same for all postgraduate awards

.....
.....

# Appendix 2

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