



Workshop: Developing NQF-RPL-CATS Policies for Somalia

**Sessions 7 and 8: CATS:
Concepts, Objectives, Benefits,
Application, Cases and more**

8th and 9th November 2024

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Session 7:

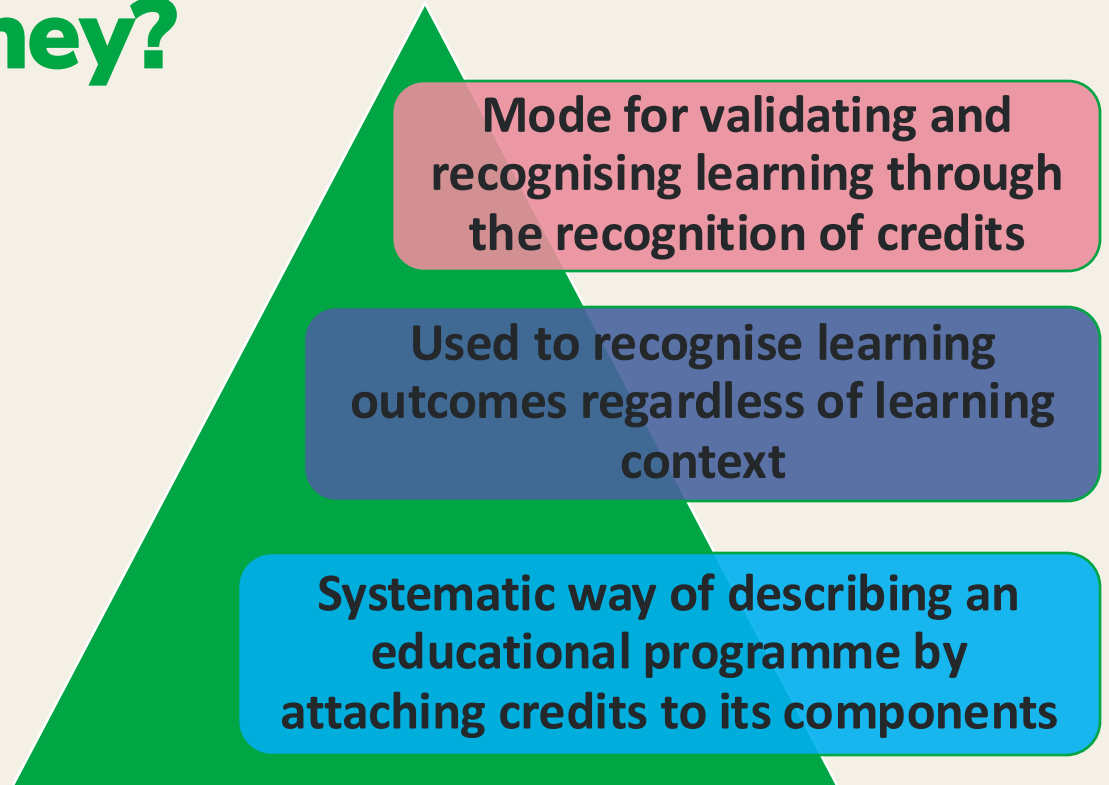
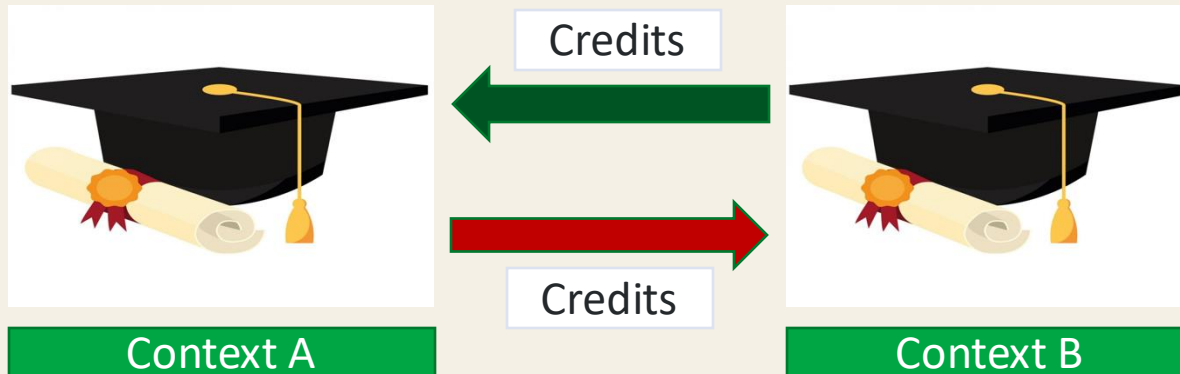
CATS: Concepts, Objectives, Benefits and Application Rules

- Somalia has taken a decisive and game-changing step towards ensuring the continued relevance, quality, recognition and international comparability of her qualifications through the development of the a comprehensive NQF.
- For the comprehensive NQF to be an effective quality assurance, articulation, mobility, progression and lifelong learning tool that it is desired to be, it will require more than just a qualification map and level descriptors.
- Like all NQFs, it will demand for implementable standards, policies and systems that will make the understanding, classification, comparability and recognition of qualifications easier.
- **One such system is the Credit Accumulation and Transfer System (CATS).**

CAT Systems – what are they?

‘Credit systems’ means a transparency tool for facilitating the recognition of credit(s). These systems can comprise, inter alia, equivalences, exemptions, units/modules that can be accumulated and transferred, the autonomy of providers who can individualise pathways, and the validation of non-formal and informal learning.

[EQF Recommendation \(2017\)](#)



It is a form of currency used to exchange acquired learning outcomes for a qualification

Some Definitions related to CATS

SADC-CATS Guideline, 2021

SADC-CATS Guideline (2021)

- **Credit**: The amount of learning contained in a qualification or part-qualification whereby one (1) credit is equated to ten (10) notional hours of learning. Credits are generally expressed in whole numbers.
- **Credit accumulation**: The totalling of relevant credits required to complete a qualification or a part-qualification.
- **Credit transfer**: The vertical, horizontal or diagonal relocation of credits towards a qualification or part-qualification on the same or a different level, usually between different programmes, departments or institutions. **Credit transfer is the key to successful study mobility**. Education and training institutions may make agreements which **guarantee automatic recognition and transfer of credits**.

South Africa, SAQA

- ‘Credits’ means the amount of learning contained in a qualification or part-qualification whereby one (1) credit is equated to ten (10) notional hours of learning. (SAQA, 2021).
- ‘Credit transfer’ means the vertical, horizontal or diagonal relocation of credits towards a qualification or part-qualification on the same or different level, usually between different programmes, departments or institutions. (SAQA, 2021)
- *Source of these definitions: SAQA. 2021. Policy and Criteria for Credit Accumulation and Transfer within the National Qualifications Framework. (as Amended, 2021).*
<https://www.saga.org.za/sites/default/files/2021-04/Policy%20and%20Criteria%20for%20Credit%20Accumulation%20and%20Transfer%20within%20NQF-2021.pdf>

Some Definitions related to CATS...cont'd

Credit (EQF Recommendation)

- 'Credit' means confirmation that a part of a qualification, consisting of a coherent set of learning outcomes has been assessed and validated by a competent authority, according to an agreed standard; credit is awarded by competent authorities when the individual has achieved the defined learning outcomes, evidenced by appropriate assessments and can be expressed in a quantitative value (e.g. credits or credit points) demonstrating the estimated workload an individual typically needs for achieving related learning outcomes. (EQF, 2017).
- 'Credit transfer' means the process of allowing individuals who have accumulated credit in one context to have it valued and recognised in another context. (EQF, 2017)

• Source of these definitions: EQF Recommendation 2017.
[https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017H0615\(01\)&from=EN#d1e32-20-1](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017H0615(01)&from=EN#d1e32-20-1)

Credit (ECTS)

- ECTS credits express the volume of learning based on the defined **learning outcomes** and their **associated workload**.
- 60 ECTS credits are allocated to the learning outcomes and associated workload of a full-time academic year or its equivalent, which normally comprises a number of educational components to which credits (on the basis of the learning outcomes and workload) are allocated. ECTS credits are generally expressed in whole numbers.
- *ECTS users' guide 2015*, Publications Office, 2017, <https://data.europa.eu/doi/10.2766/87192>

Purpose of CATS

Example: Seychelles (SNCATS):

To provide a common understanding and unified framework for implementation of credit accumulation and transfer across the education and training sector, as well as for the designing and quality assurance of learning programmes in Seychelles.

Example: Seychelles (SNCATS):

- All sectors of the education and training system and levels of the SNQF.
- SQA, education and training providers (public and private), regulatory bodies, curriculum developers, industry, non-governmental organisations, private entities, recognised professional bodies and learners.
- Qualifications, part-qualifications and micro-credentials.
- Qualifications acquired from formal, informal and non-formal learning.
- Recognised foreign qualifications.

Example: Ghana (GhCATS):

- Create a common understanding of CATS and its application in Ghana.
- Enhance intra and inter institutional mobility of students within and outside Ghana.
- Support access to education and training, progression, flexibility of learning pathways and lifelong learning.
- Support implementation of new integrated GhNQF.
- Support the internationalisation agenda of Ghana's tertiary education as espoused in the ESP 2018-2030.

Benefits of CATS

Multi-skilling and up-skilling of employees

Equal learning opportunities for all



Facilitates easy mobility of learners and workers, also knowledge and skills transfer, global citizenship

Promotes lifelong learning through flexible learning pathways



Duplication of learning

QUALITY
QUALIFICATIONS

Credit Hour Approach Vs Notional Hour Approach

CREDIT HOUR APPROACH

- The credit hour approach is based on the number of “contact hours” per week and per semester. This should include any time that the lecturer spends with students such as lecture time and laboratory time.
- A credit hour is normally based on the number of contact hours per week.
- As there are normally 15 weeks in a semester, a module that is allocated one (1) contact hour per week per semester is referred to as a one credit module. Similarly, a 3 credit module represents three hours of contact time per week for 15 weeks; and a 4 credit module represents 4 hours of contact time per week for 15 weeks.
- It should be noted that in this approach the time for private study, research, and the writing of assignments and examinations, etc. is **not included** in the calculation.
- Mostly used in USA.

CATS: Concepts, Objectives, Benefits and more

NOTIONAL HOUR APPROACH

- Notional study hours (also referred to as “learning hours”) represent an estimate of the time spent by an average full time equivalent student to master a unit of learning.
- In countries such as Namibia, South Africa, Kenya, Seychelles, Zambia and the United Kingdom (England, Wales and Northern Ireland) it has been stipulated that 10 notional study hours are worth one credit. The International Labour Organisation (ILO) has also used this approach in discussing credit accumulation and transfer systems (Tuck, 2007).
- In this approach, the hours referred to here include **all the learning activities of the student**, inclusive of contact time (lecture time, tutorials, labs), private study, research, assignment writing, examinations, etc.
- The following assumptions are made: The average student accumulates 8 study hours per day. This amounts to a 40 hours/ week. Undergraduate programmes are generally based on a 30-week full-time academic year. At 40 hours per week this amounts to 1200 hours per year.
- 10 notional hours to 1 credit is minimum - to be met by all institutions. Maximum to be informed by workload.

Allocating Credits to a Learning Programme

1 • All learning programme components are described

2 • Learning outcomes of each programme component are defined

3 • Learning activities are described

4 • Workload needed for a learner to complete the learning activities is estimated

5 • Proposals are collected, analysed and the estimated workload is expressed in credits

Modalities and Types of Credit Transfer

❖ **Modalities of credit transfers: vertical, horizontal and diagonal.**

❖ **Types of credit transfer:**

- **Block Credit Transfer:** entails reducing the total credit of the receiving programme by the amount of credits from the completed programme.
- **Course Exemption:** An individual may be exempted from taking a specific course or module of a programme based on the learning achieved in previous studies. This is applicable to both completed and uncompleted programmes.

Linkage between CATS and RPL

- CATS and RPL are now seen as key, interconnected components of a country's education and training system.
- Thus, the CATS policy/ guidelines will have to be implemented side-by-side with the national policy on recognition of prior learning so as to facilitate seamless recognition of credits acquired from non-formal and informal learning settings.
- This will also promote learner mobility and articulation from non-formal and informal learning settings into the higher education sub sector.
- As with formal education, the award of credits to outcomes acquired through non-formal and informal learning should be preceded by an assessment to verify the achievement of learning outcomes.

CATS and Micro-credentials

- National governments, and regional and international organisations have intensified debate and research with the aim to define the role and place of micro-credentials in national education and training systems and qualifications frameworks, enhancing their benefits for lifelong learning and employability.
- According to the June 2022 European Union Council Recommendation on a European Approach to Micro-credentials for lifelong learning and employability, the record of the learning outcomes that a learner has acquired following a small volume of learning.
- The description of and focus on learning outcomes is strongly emphasised when allocating credits to micro-credentials. Learning outcomes are considered as facilitating the design, delivery and assessment of full qualifications or components of qualifications.
- The same approach used to allocate credits to full qualifications should be applied to micro-credentials.

CATS and Lifelong Learning

- The higher education learning landscape is changing with the rapid development of more diversified and flexible learning opportunities – including:
 - Blended learning, new forms of open online learning, work-based learning, self-directed learning, individual learning pathways, continuing professional development.
- The strength of CATS is that it can be used in all these lifelong learning contexts, applying the principles for credit allocation, award, accumulation and transfer.

CATS in the context of ACQF: Guideline 4 – Validation and Recognition of Learning

Objectives of ACQF Guideline 4

**Facilitate
Recognition of
qualifications
among African
States**

**Facilitate Systematic
exchange of
information between
ACQF, NQFs and
recognition
structures (ARC)**



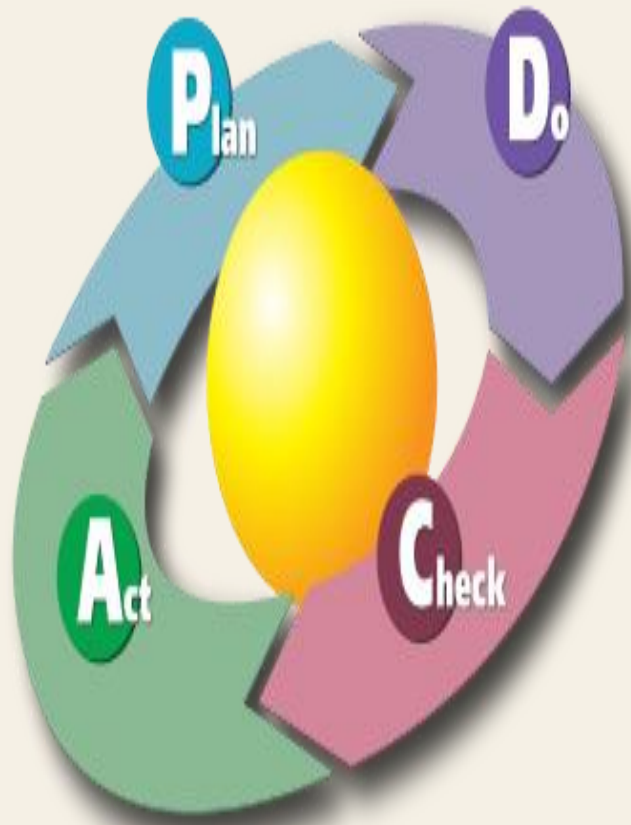
**Facilitate RPL
within and
among African
States**

**Facilitate
Implementation
of CATS in
Africa**

ACQF Guideline/ Training Module 4 – CATS Principles:



The Deming Cycle Approach to CATS Development and Implementation



PLAN:

- Why CATS? Objectives?
- Enabling Legislation in place?
- NQF/ NQS elaborated?
- Governance structures?
- Scope of CATS – define?
- Who are the key stakeholders?
- QA arrangements in place?

DO:

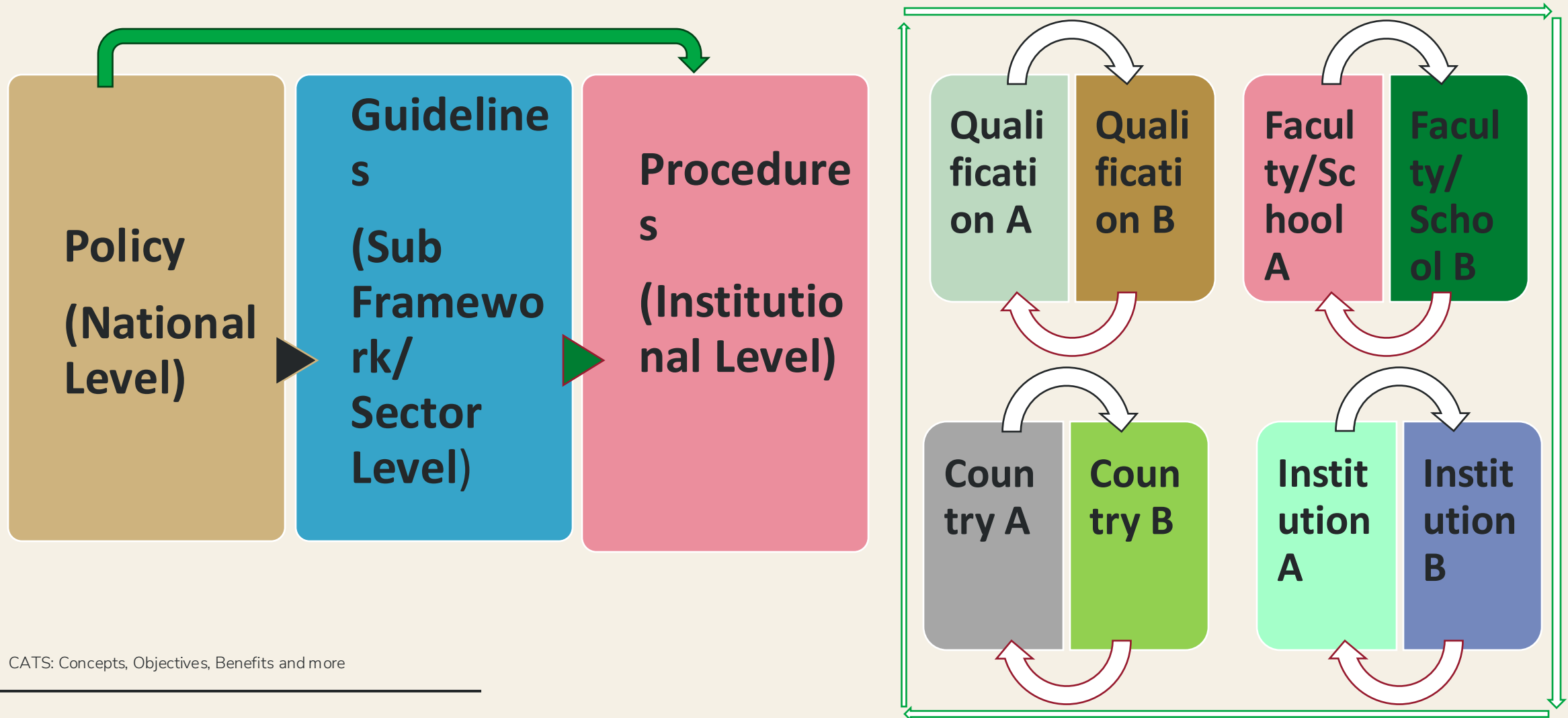
- Constitute a Technical Working Group
- Define ToRs for the TWG
- Develop CATS Policy
- Implement CATS – Guidelines and Procedures

ACT:

- Take corrective action – amend, revise or replace policy, guidelines or procedures if deviations from objectives are observed
- Sustain policy, guidelines or procedures if CATS objectives are constantly met

CHECK: (against objectives)
Assess effectiveness of policy/ guidelines/ procedures – at registration/ accreditation of learning programmes and compliance audits

CATS Implementation Approaches



CATS Implementation Stages – ACQF Guideline 4

Stage 1: Establishing an administrative structure for the CATS

Stage 2: Providing information to learners

Stage 3: Processing applications for credit transfer

Stage 4: Decision making and approval of applications

Stage 5: Documentation and record keeping

Need for Alignment of Programmes

- To ensure smooth implementation of CATS, education and training institutions will be required to:
 - Align new/ proposed programmes with the comprehensive NQF and national CATS policy/ guidelines.
 - Embark on curriculum review processes of accredited programmes under implementation and align these programmes with the comprehensive NQF and CATS policy/ guidelines.
 - Develop/ align existing quality assurance mechanisms with the requirements of the comprehensive NQF and the CATS policy/ guidelines.

Monitoring and Evaluation of CATS

- There will be need to establish a CATS monitoring and evaluation strategy to ensure the policy objectives are monitored, tracked and evaluated.
- The lead institution will work collaboratively with the quality assurance agencies and education and training sector regulators to:
 - Develop and implement monitoring and evaluation tools and performance indicators that are integrated in the annual plans and development planning processes; and,
 - Develop and institutionalise tools for effective monitoring and evaluation.

Challenges to CATS Implementation

Different education and qualifications systems

Lack of trust among education and training institutions

Differences in structure and content of learning programmes – lack of harmonisation, including of duration and credits

Absence of clear procedures and QA systems, lack of transparency

Learning outcomes approach: differences in understanding and application

Limited capacity in the development of institutional CAT systems and procedures by education and training institutions

Resistance to change by stakeholders

Some Solutions to Counter the Challenges

- CATS to be enabled by legislation.
- Structures for CATS implementation to be put in place.
- CATS policy/ guidelines/ procedures a must.
- CATS should be linked to the NQF – determine applicability of CATS to NQF Levels/ Sub frameworks, also NQS as applicable.
- Harmonisation of learning programmes is a key enabler of CATS.
- Stakeholder involvement key to the success of CATS.
- CATS should not be too prescriptive – institutional autonomy to be respected.
- Synergies between HEIs to be encouraged.
- Quality assurance should form an integral part of CATS. CAT should only be applicable to accredited/ recognised institutions.
- Promotion of learner mobility and life-long learning should always be at the heart of any CATS.

✓ End of Session 7.

✓ Thank you for your attention.

✓ Questions/ observations/ comments?

Session 8:

CATS: Types, Models Comparison, Cases and Examples

Types of Credit Systems

**System 1: SADC CATS
(Widely used in Africa)**

1 Credit = 10 notional
hours, 120 Credits per
Year

**System 2: ECTS
(Europe)**

1 ECTS Credit = 25 –
30 hours, 60 ECTS
Credits per Year

**System 3: AUCS
(America)**

1 Semester Credit
Hour = 15 – 16
Contact Hours, 30
Semester Credit
Hours per Year

Examples of Credit Systems in Selected African Countries

Country	Type of CATS	Definition of Credits	Nature of CATS Governing/Coordinating Body
Kenya, Seychelles, South Africa, Zambia, Zimbabwe	SADC-CATS	10 notional hours = 1 credit	NQF Authorities (KNQA, SQA, SAQA, ZAQA), QAA (ZIMCHE)
Angola	Similar to SADC-CATS, in principle	15 notional hours = 1 credit	National Qualifications Institute (INQ)
Uganda	AUCS	15 contact hours	QAA (NCHE)
Tunisia	ECTS	25 – 30 hours = 1 credit	Ministry of Higher Education and Scientific Research (in consultation with councils/ committees)
Mozambique	SADC-CATS (TVET), ECTS (HE)	10 notional hours = 1 credit (TVET), 25-30 notional hours (HE)	Technical NQF Commission, chaired by CNAQ

Examples of Regional Credit Systems

Region	Name/ Title of CAT System	Definition of Credit
Southern African Development Community (SADC)	Guidelines for Southern African Development Community Credit Accumulation and Transfer Systems (SADC-CATS)	10 notional hours = 1 credit
East African Community (EAC)	East African Credit Accumulation and Transfer System (EACATS) in Higher Education	10 notional hours = 1 credit
European Union (EU)	European Credit Transfer and Accumulation System (ECTS)	25-30 hours = 1 ECTS credit
United Kingdom (UK)	Credit Accumulation and Transfer Systems (CATS)	10 notional hours = 1 credit
Asia-Pacific (APAC)	University Mobility in Asia and the Pacific (UMAP) Credit Transfer Scheme (UCTS)	38-48 hours = 1 UCTS credit
Latin America (LATAM)	Latin American Reference Credit (CLAR)	24-33 hours = 1 CLAR credit

More about the SADC-CATS

- A learner-centred system for credit accumulation and transfer in SADC region based on the principle of transparency in the learning, teaching and assessment processes.
- Its objective is to facilitate the planning, delivery and evaluation of study programmes and student mobility by recognising learning achievements and qualifications and periods of learning”.
- Supplementary – supplementary work for differences in depth and breadth of curricula.
- Recognition of prior learning – RPL credits = formally acquired credits.

More about the SADC-CATS...Cont'd

- The emphasis of credit is on measuring student workload towards achieving intended learning outcomes rather than teaching load (contact hours).
- Workload is an estimation of the time (notional hours) the individual typically needs to complete all learning activities such as lectures, seminars, projects, practical work, work placements and individual study required to achieve the defined learning outcomes in formal learning environments.
- It is recommended that the recognition of credits for the purposes of transfer across departments, institutions, sectors and countries be determined by the nature of the qualifications involved, the relationship between them, the nature, complexity and extent of the curricula associated with the specific subjects to be recognised for exemption and/or inclusion, as well as the nature of the assessment used.

More about the EACATS

- Tool for the development of credible, efficient and transparent process both for the accumulation and transfer of credit within an institution or country, from institution to institution, from country to country, and between different educational sectors and contexts of learning (i.e. formal, non-formal, informal and work-based learning).
- Notional hours of learning comprises the total amount of time it would take an average learner to meet the outcomes defined in a learning experience and include inter alia face to face contact time, time spent in structured learning in the work place, time for completing assignment and research, and time spent in assessment processes.

More about the ECTS

ECTS is a learner-centred system for credit accumulation and transfer, based on the principle of transparency of the learning, teaching and assessment processes. Its objective is to facilitate the planning, delivery and evaluation of study programmes and student mobility by **recognising learning achievements, qualifications and periods of learning**.

- **Main uses of ECTS:**
 1. Transferring between universities
 2. Studying abroad (e.g. an exchange semester at a different university)
 3. Applying for further study (like a Master's or PhD)
- **ECTS Key Features:** ✓ learning outcomes ✓ Workload ✓ Allocation of credits ✓ Awarding credits ✓ Accumulation of credits ✓ Transfer of credits ✓
- **ECTS documentation** ✓ The use of ECTS credits is facilitated and quality enhanced by the supporting documents: □ **Course Catalogue, Learning Agreement, Transcript of Records, and Work Placement**
- **Certificate** ✓ ECTS also contributes to transparency in other documents such as the Diploma Supplement

More about the UK CATS

- In the United Kingdom, there are a number of CAT schemes 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). It should be noted that 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 through the use of the notional hour approach.

More about the Asia-Pacific UCTS

- University Mobility in Asia and the Pacific (UMAP) has developed the UMAP Credit Transfer Scheme (UCTS) to facilitate greater student mobility in the region by providing a framework for establishing credit transfer arrangements.
- Initially based on ECTS, but later changed to Asian Academic Credits (AACs), then UCTS.
- The student workload is defined as the amount of time that students need to complete all learning activities which consists of:
 - a) Attending classes/lectures; and
 - b) Fulfilling all other academic requirements such as homework, group projects, team discussion, preparation for examinations, internships, and individual study, etc.

More about the Latin American CLAR

- The Latin America Reference Credit (CLAR) highlights the importance of taking into account the following: student time, the volume of work required to gain certain competences, and the weighted and realistic distribution of the learning activities included in the curriculum so as to avoid unnecessary prolongation of qualifications or repetition of courses.
- As a transferrable credit system, the CLAR seeks to:
 - a) Facilitate student and academic transfer and mobility among Latin American higher educational establishments using a common conversion outline; and
 - b) Facilitate the mutual recognition of courses and academic activities based on expected and intended learning outcomes.

Allocating Credits to a Learning Programme - Examples

[A] Contact Time		[B] Independent Study Time	
Activity	Time Commitment (hours)	Activity	Time Commitment (hours)
Lecture	<input type="text"/>	Preparation for scheduled work	<input type="text"/>
Tutorial	<input type="text"/>	Completion of set tasks	<input type="text"/>
Seminar	<input type="text"/>	Reading or practice	<input type="text"/>
Webinar	<input type="text"/>	Conducting research	<input type="text"/>
Project supervision	<input type="text"/>	Completing projects	<input type="text"/>
Demonstration	<input type="text"/>	Revision work	<input type="text"/>
Practical work	<input type="text"/>	Other work	<input type="text"/>
Field work	<input type="text"/>		
External visit	<input type="text"/>		

[C] Assessment Time		Total Study Time and Credits	
Activity	Time Commitment (hours)	A + B + C = E (notional study hours)	
Final written examination	<input type="text"/>	$E/10 = \text{Total credits for module}$	
Tests	<input type="text"/>		
Written assignments	<input type="text"/>		
Presentations	<input type="text"/>		
Dissertation	<input type="text"/>		
Set exercises	<input type="text"/>		
Oral examinations	<input type="text"/>		
Practical skills assessment	<input type="text"/>		

Activity	Time Commitment (notional hours)
Contact time	
Lectures	48
Tutorials	6
Group Seminars	4
Field Trips	4
Demonstrations	6
Total	68
Independent study time (indicative)	
Preparation for scheduled sessions	10
Writing assignments	8
Reading module material	20
Revision	10
Total	48
Scheduled assessment time	
Tests	1
Final Examination	3
Total	4
Grand Total	120

Allocating Credits to a Learning Programme – Examples...Cont'd

Consider a semester module (based on 15 weeks) with 4 hours of lecturing per week, 2 hours of tutorials per week, 2 hours of laboratory practical work per week, 4 hours of self-directed learning per week, 10 hours of formative and summative assessment:

Formula for calculating credits (*where TC = Total Credits*):

$$TC = \frac{\text{lectures} + \text{tutorials} + \text{practical works} + \text{internships} + \text{projects} + \text{assessment}}{10}$$

$$TC = (4 \times 15 \text{ (lecture)} + 2 \times 15 \text{ (tutorials)} + 2 \times 15 \text{ (practical)} + 4 \times 15 \text{ (self-study)} + 10 \text{ (assessment)}) / 10 = 190 / 10 = \underline{19}$$

Allocating Credits to a Learning Programme – Examples...Cont'd

First Year of
Biomedical
Laboratory
Sciences
Programme

1 st Year							
Module code	Name of module	Credits	Face to face hours	Self study	Practice	Assignment / exercise	Total
Semester 1							
LAN 101	Languages and Communication	10	34	30	20	16	100
ICT 101	Introduction to Computer Sciences and Research	10	30	20	30	20	100
MPB 101	Medical Psychology and Bioethics	10	34	30	20	16	100
BMS 101	Bioinstrumentation	15	51	40	30	29	150
BMS 102	Analytical and Physical Chemistry	15	45	40	45	20	150
Semester 2		60					
BMS 103	Cell Biology & Genetics	10	34	30	20	16	100
BMS 104	Biochemistry	10	30	20	30	20	100
BMS105	Anatomy and Physiology	10	40	30	20	10	100
CLS 101	Haematology I	10	34	30	20	16	100
CLS 102	Microbiology I	10	40	25	20	15	100
CLS 103	Parasitology and Entomology	10	34	30	20	16	100
		60					
Total		120					1200

Converting Credits across CAT Systems

Country/ Region	APAC	USA	EU	LATAM	UK	SADC and EAC
Credit Conversion	1 UCTS/ AACs	1 AUCS	1.5 ECTS	1.5 CLAR	3 CATS	3 CATS

Note: 1) 1 ECTS = 2 UK, SADC-CATS and EACATS
2) 1 AUCS = 3-4 SADC-CATS and EACATS

✓ End of Session 8.

✓ Thank you for your attention.

✓ Questions/ observations/ comments?