



Equipping Learners for a Dynamic Digital Future: Insights from Integrating 21st Century Skills in East Africa's Education Systems

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Challenges and opportunities to integrating 21st century skills in teacher education in Kenya

Presenter: Elizabeth Owiti
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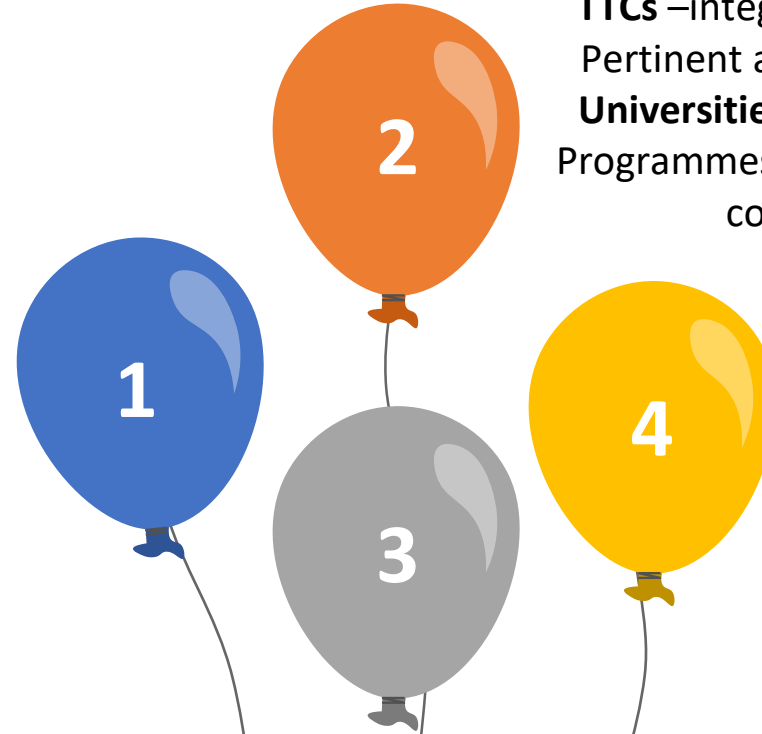


Background of teacher education in Kenya

Pre-service teacher training

TTCs – training of teacher educators done though inadequate, integration of core competencies is still low. E-assessment

Universities – Teacher educators have not been trained therefore teacher training practices have not integrated core competencies and values.



Basic Education curriculum Framework (BECF)
BECF has integrated core competencies and PCI in the learning experiences across all levels of learning.

Teacher training curriculum

TTCs –integrated core competencies and Pertinent and contemporary Issues (PCI)
Universities - reviewing teacher Training Programmes to reflect 21st century teacher competencies and skills

Inservice (Retooling)

All teachers who graduated before 2023 are required to undergo a mandatory one-year retooling and upgrading programme for compliance with the curriculum change

Sample: Curriculum design for Diploma in teacher education

10:09

kicd.ac.ke/cbc-materials/curriculum-designs/diploma-in-teacher-edu

Social Studies

		f) locality, appreciate the importance of vegetation in Eastern Africa.	the vegetation within the locality <ul style="list-style-type: none"> Undertake a project to develop a tree nursery within the learning institution 	conservation of vegetation?
<p>Core Competencies to be developed: Communication and Collaboration: as teacher trainee brainstorm on factors that influence the distribution of vegetation in Eastern Africa</p> <p>Values: Unity: as teacher trainees undertake a project to develop a tree nursery within the learning institution</p>				

Suggested Formative Assessment Rubric



Sample: assessment rubric

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kicd.ac.ke/cbc-materials/curriculum-designs/diploma-in-teacher-edu

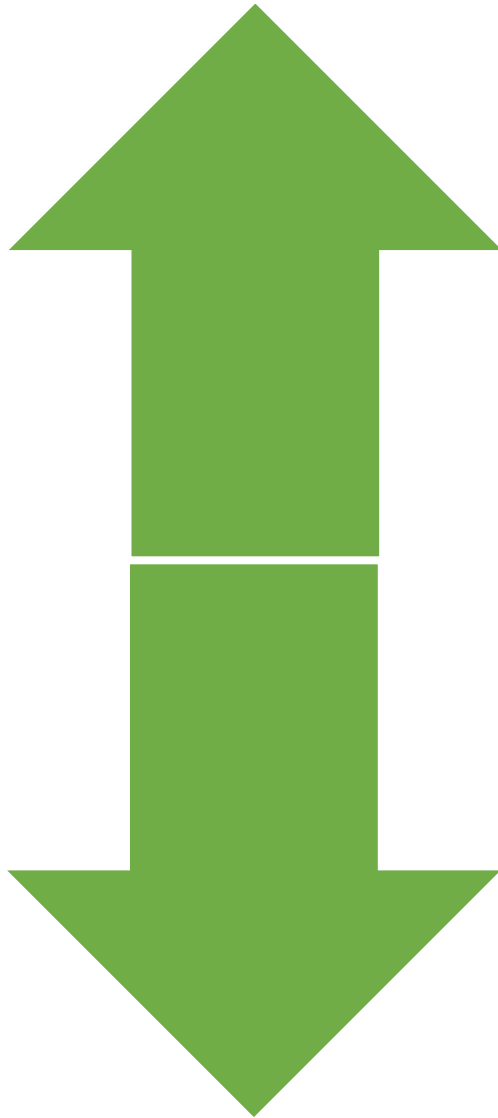
Social Studies

Level \ Indicator	Exceeding Expectations	Meeting Expectations	Approaching Expectations	Below Expectations
Ability to discuss factors that influence distribution of vegetation in Kenya and Eastern Africa	Correctly and comprehensively discusses factors that influence distribution of vegetation in Kenya and Eastern Africa	Discusses factors that influence distribution of vegetation in Kenya and Eastern Africa	Discusses some of the factors that influence distribution of vegetation in Kenya and Eastern Africa	Has challenges discussing some factors that influence distribution of vegetation in Kenya and Eastern Africa
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry

Evidence on 21st century skills in Kenya

❑ Only 10% of adolescents aged 13-17 years have proficiency in critical 21st century skills such as problem solving, collaboration and self awareness (RELI, 2022).

❑ 3 in 10 primary schools have computer labs (FLANA, 2023).



❑ 39% of teachers are trained in general computer use (Uwezo, 2021).

❑ 6 in 10 teacher (60%) attend in-service training in the last 2 years (Uwezo, 2021).

Challenges in integrating 21st century skills in teacher education in Kenya

Curriculum and curriculum support materials have not fully unpacked 21st century skills.

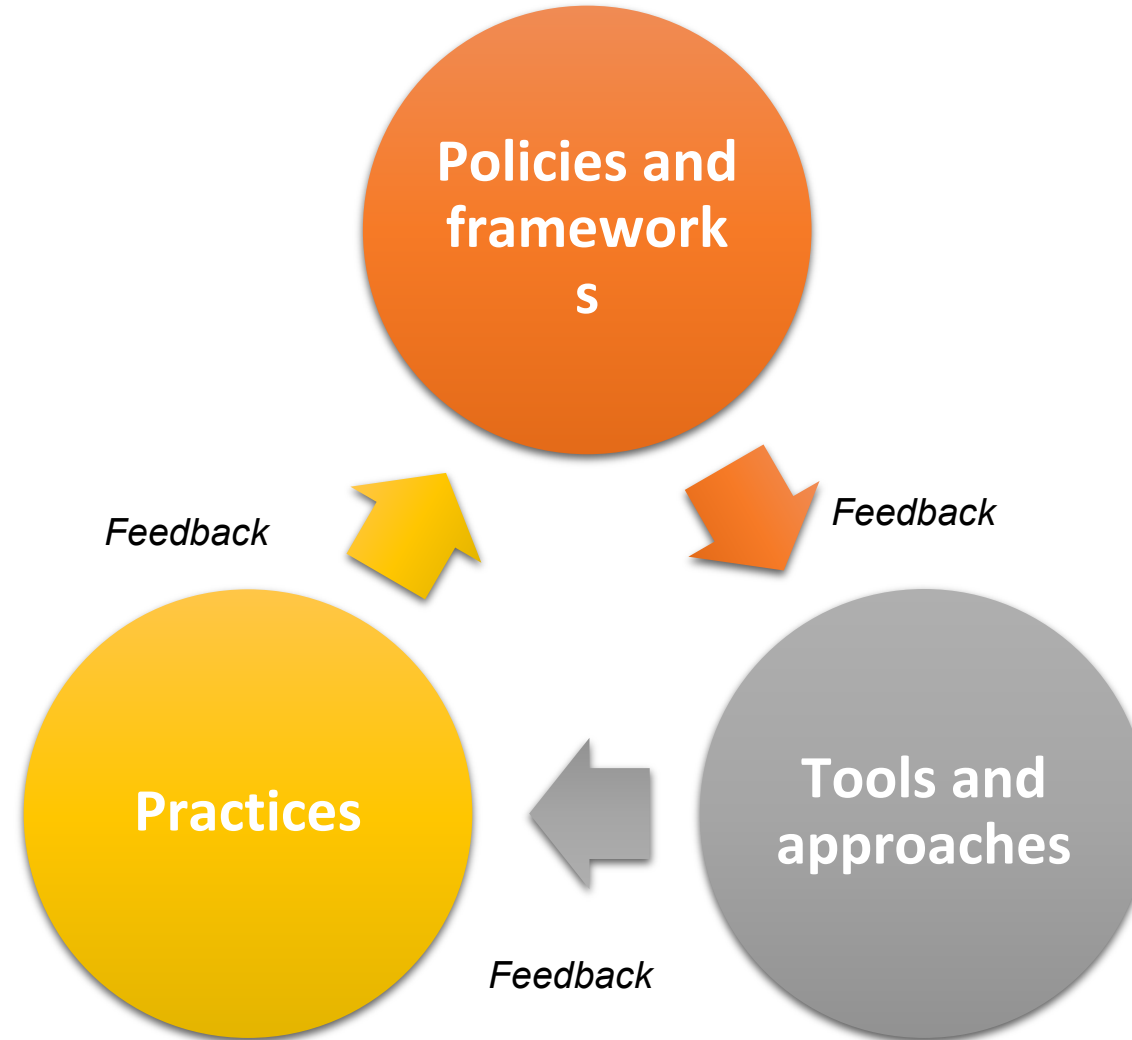
Teacher training practices have not adopted pedagogical approaches suitable for nurturing 21st century skills.

Assessment practices have no clarity as to how the assessment of 21st century skills should be integrated into the formative and summative domains.

Weak feedback loops: Data from classroom practices is not utilized to inform teacher training and review of curriculum designs and resource materials.



Opportunities for integrating 21st century skills in teacher education in Kenya





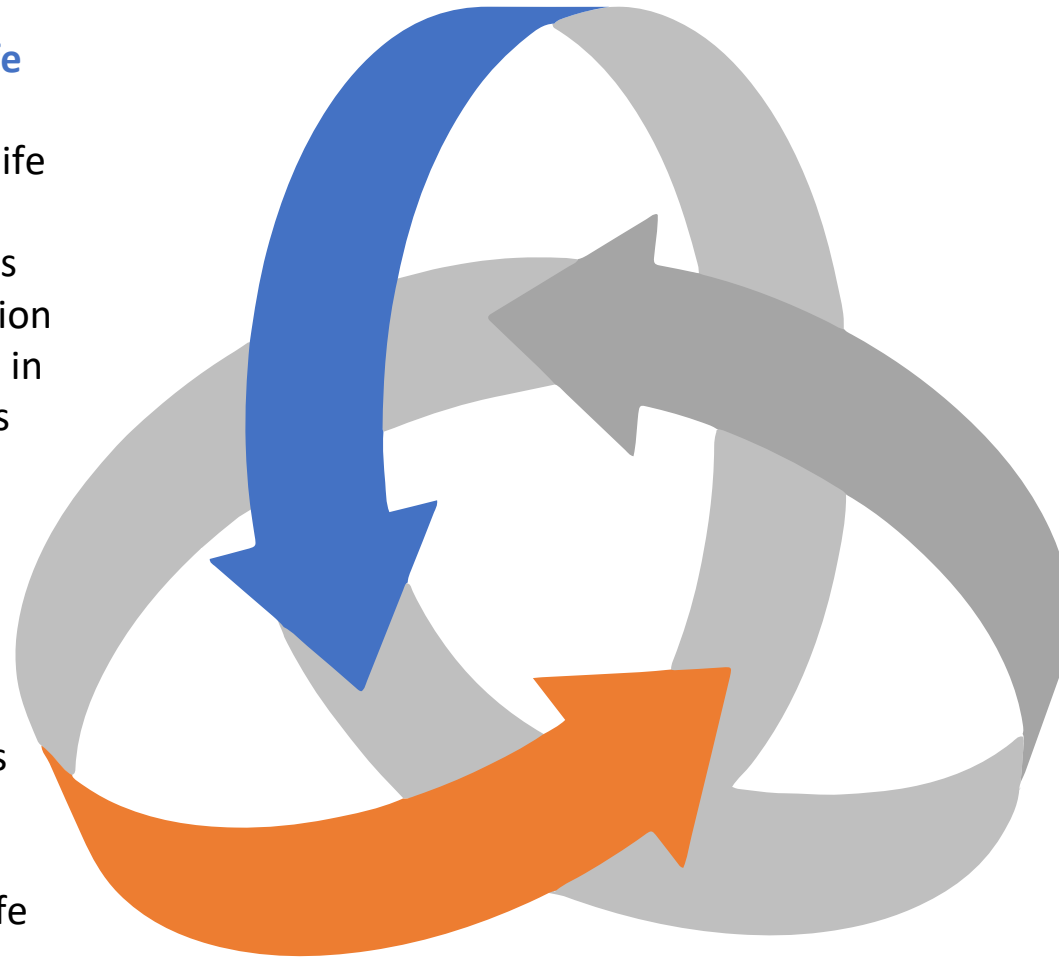
Teacher training on integration of life skills and values: ALiVE way

1. Introduction to life skills and values

- Contextualization of life skills and values
- Life Skills and Values Frameworks in Education
- Contemporary Issues in Life Skills and Values Education

2. Assessment

- Concepts and principles of assessment
- Types, techniques and tools for assessment of life skills and Values
- Assessment approaches for life skills and values
- Reporting and use of assessment results



3. Nurturing

Whole School Approach to nurturing of values and life skills (formal, non-formal and informal dimensions)

Whole school approach to development of 21st century skills



WSA

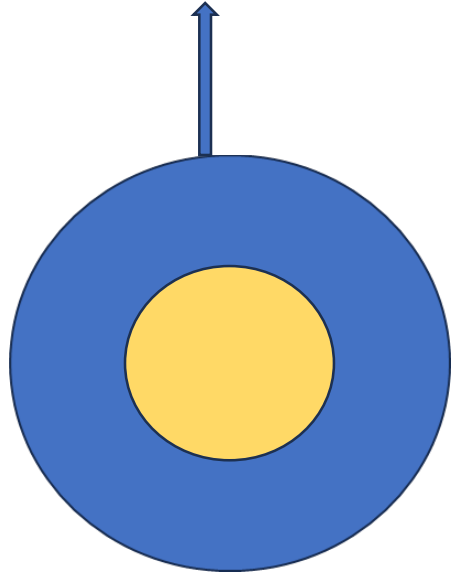
Entails recognizing that all members of the school community have an impact on learners.

Develop approaches for engaging different stakeholders in nurturing 21st century skills

Curriculum dimensions and integration of VaLi

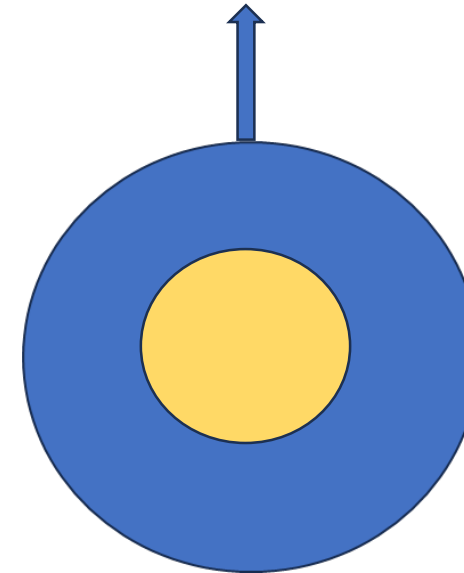
Formal dimensions:

group work, debates,
dramatization, talks,
sharing of resources



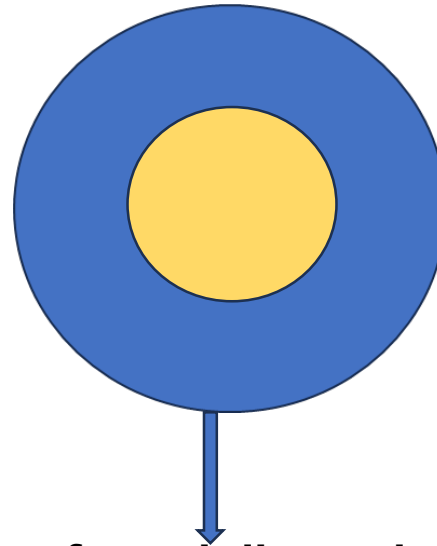
Informal dimension:

talking walls and trees,
modelling proper dressing,
polite language, sharing
resources among others



Non-formal dimension:

club, Societies, Sports
activities, science congress





Key lessons from ALiVE work in teacher education

- 1** Communities of practice are key in helping teacher educators develop appropriate pedagogical and assessment strategies in Competency Based Curriculum.
- 2** School leadership plays a major role in influencing the institutional culture on development of 21st century skills through whole school approach.
- 3** Capacity building of teachers to unpack complex skills and values into subskills and performance indicators enhances integration in teaching and assessment.
- 4** Shifting of mindsets: The success of integration and assessment of 21st skills to a large extent depends on teacher shifts of mindsets from teacher centered to learner centered pedagogical and assessment approaches.



Thank you



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Title: Integration of 21st -Century Skills in Curriculum, Pedagogy, and Assessment in Tanzania Mainland and Zanzibar

Presenter: Ramadhani Matimbwa
ALiVE Senior Program officer
Milele Zanzibar Foundation



Introduction

- Technological and globalization have transformed the global work landscape and 21st-century skills are identified as essential tools.
- We experience the skills Mismatch in Sub-Saharan Africa
 - ❖ Graduates often struggle to secure qualified positions, while employers are dissatisfied with their skills (*Crossman & Clarke, 2010; ILO, 2020b*).
 - ❖ Young workers may be overqualified but lack practical skills (*ILO, 2020a*).
 - ❖ **Barriers includes:**
 - Lack of essential skills such as communication, decision-making, and problem-solving skills (*Inter-University Council for East Africa, 2015*). Hence the lack complex skills and flexibility

Both jurisdiction are undertaking curriculum reforms

- Roll out started 2023
- Few grades finishing up with old curriculum
- Different curriculum material are still underdevelopment and refining
- In Zanzibar - they are now reviewing teacher training curriculum

Skills reflected into national documents

Prioritized Skills

1. Creativity
2. Self-awareness
3. Collaboration
4. Critical thinking
5. Problem solving

S/N	Thinking Skills	Emotional Skills	Social Skills	Knowledge based Skills
1	Creativity	Self-awareness	Collaboration	Information literacy
2	Critical thinking	Self-efficacy	Communication	Digital literacy
3	Problem solving	Coping		Literacy
4	Curiosity			Numeracy
5	Self-directed learning			Entrepreneurship (mindset)

Tanzania Mainland

Primary Education Curriculum

- Creativity
- Critical Thinking
- Problem Solving
- Collaboration
- Communication
- Digital literacy
- Innovations
- Cooperation

Secondary Education Curriculum

- Creativity
- Collaboration
- Problem Solving
- Communication
- Critical thinking
- Innovations
- Digital skills
- Emotional
- Cooperation
- Self-confident
- Values
 - Democracy, justice, peace, unity, patriotism, integrity, positive attitude, qualities, dignity.

Curriculum Framework

- Communication
- Creativity
- Collaboration
- Critical thinking
- Problem-solving



Tanzania, Mainland

Prioritized

1. Communication
2. Creativity
3. Collaboration
4. Critical thinking
5. Problem-solving

Learning Skills	Literacy Skills	Life Skills	Soft Skills
Enable students to develop mental processes required to adapt and improve upon a modern work environment	Focus on how students can discern facts, publishing outlets and technology behind them	Take a look at intangible elements of a student's everyday life, personal and professional qualities	Enable students to acquire interpersonal relationships
Critical thinking	Information	Flexibility	Emotional intelligence
Complex problem solving	Media	Decision making	Customer focus/service orientation
Creativity	Technology	Negotiation leadership	Personal skills
Collaboration		Initiative	
Communication		Productivity	



Expected characteristics

*National Curriculum
Framework for Basic
Education and Teacher
Education (2019, p. 12)*

- i. **Self-confident:** demonstrate positive self-esteem, self-awareness, believe in oneself, fully be aware of one's potential and capabilities, and be autonomous, self-reliant, independent and collaborative.
- ii. **Sociable:** possess empathy, respect and social skills for establishing effective and healthy relationships with other children and adults and accommodate different points of view.
- iii. **Democratic:** uphold fundamental human values and social justice.
- iv. **Communicative competence:** demonstrate competent use of a range of age- appropriate language skills in both Kiswahili and English; recognise the importance of foreign languages for communication purposes; be confident in utilising various communication skills and media;
- v. **Literate:** use various media including digital literacy.
- vi. **ICT literate:** possess basic ICT skills whilst observing netiquette and online safety measures.
- vii. **Inquisitive:** demonstrate an inquiry-based approach and continual learning; possess a positive disposition towards investigation, designing, making, testing and reporting at elementary levels; ability to express their own ideas and experiment with different ways of solving problems.
- viii. **Critical:** demonstrate critical and creative thinking; possess positive attitudes which enable one to have recognise opportunities and take risks.
- ix. **Enterprising:** courage to experiment with the basics of entrepreneurship. establish and maintain innovative enterprises both individually and in collaboration with others.
- x. **Flexible:** learn and adapte to changes; be responsible and resilient in the face of challenges.

Findings

01

Commendable intention to promote these skills in Basic Education

02

The education system of emphasizes 21st C Skills, throughout various policy documents

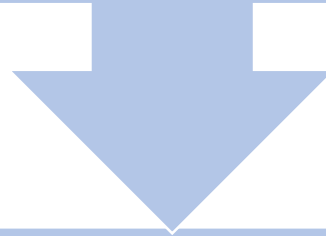
03

These skills are not a stand-alone subject rather are treated as a cross-cutting issue, among others.



Regional trends Vs Global Trends

Tanzania - Life skills are incorporated across four areas.
Zanzibar- Communication and problem-solving skills receive significant attention



Tanzania - Reflects the global recognition that these skills are not isolated
Zanzibar - Reflecting global trends highlighting their importance for success in both personal and professional life



What do these findings say about the integration of competences in education system?

Clear emphasis on integration of competences, though largely more implicit than explicit.

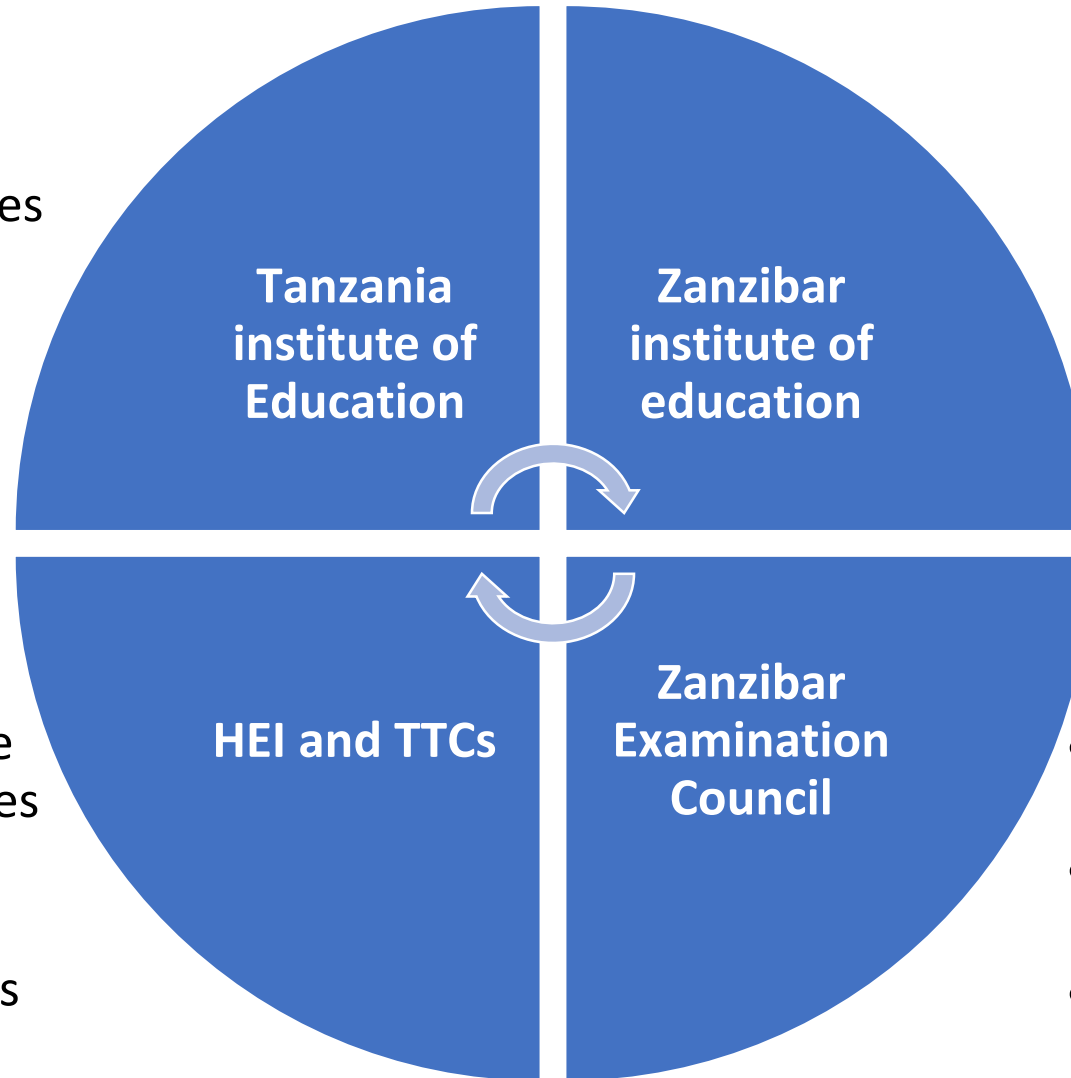
Competences are identified as content for curriculum reform.

No clear framework to guide teachers on how to interpret, implement, and assess these in classroom settings.

Curriculum reforms are opportunities for explicit systematic and deliberate integrating of competences in the education systems.

ALiVE's efforts to support the system to integrate 21st C skills

- Prioritising Skills
- Develop teachers' modules
- Develop Learning progression for Problem Solving



- Embedding Life skills in the degree and diploma courses
- Co-develop Teachers' module
- Pilot the teachers' modules

- Prioritising Skills
- Drafting national life skills framework
- Develop guideline for integration of life skills for teaching and assessment

- Develop learning progression for Creative thinking
- Design School based assessment approaches
- Support National Assessment of Creativity



AHSANTE SANAAA!!!

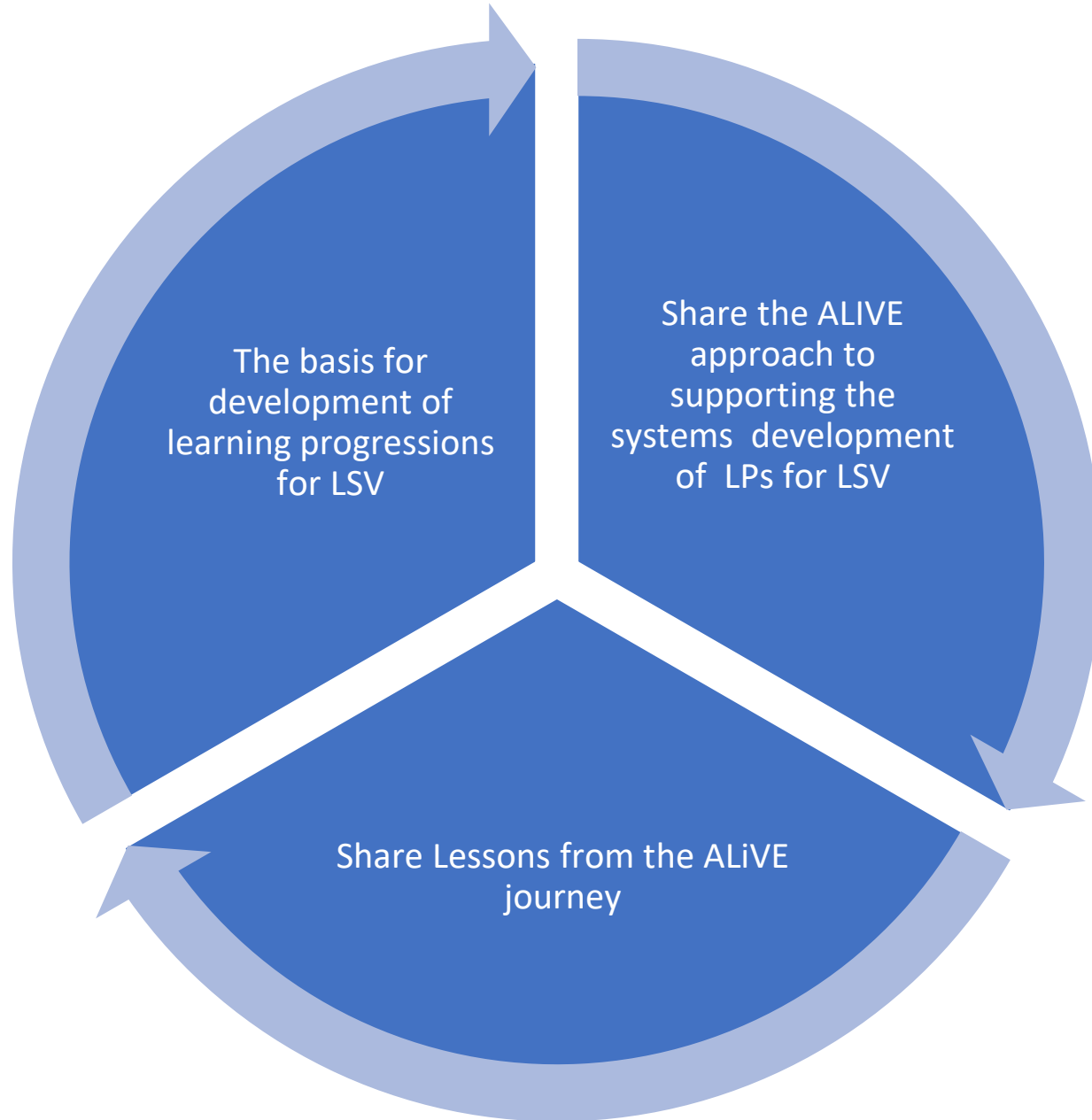
KARIBU ZANZIBAR



Developing a Framework to Enhance Assessment, Teaching and Learning of Values and Life Skills in Uganda

**Faridah Nassereka
Uwezo Uganda**

This presentations Focus





State of Competency Based education Uganda

- Curricula reviews and reforms -at primary and secondary levels to fit global and local demands
- Primary School Curriculum documents included as life skills and part of expected learning outcomes
- New Lower Secondary Curriculum -integrates generic skills in curriculum (Critical thinking and problem-solving, creativity and innovation, Communication, Cooperation and learning) **in teaching and learning processes**
- First national assessment for cohort done after 4 years of implementation
- Challenges - gaps in delivery, teacher training, in teaching and assessment of generic skills and in assessment

The collaborative undertaking to address some of the challenges

The case for development of LPs

- Skills audit indicates -lack of congruence/alignment across levels -primary, lower and upper secondary
- Limited guidance and capacities on what is expected of learners at any given grade level and how teachers can facilitate the nurturing and assessment
- Lack of clear descriptions of the skills, their subskills (& on identifying them), performance indicators, and ways of detailing their quality in key curricula documents
- Limited clarity of proficiency expectations, for teachers and assessment experts on learner competencies at different levels Pri-sec
- Need for development of resources that directly support changes in how life skills are taught and assessed- hence development of skills frameworks and teacher guides

CBC Curriculum in Uganda

*Primary 1

Theme 4: The human body and health

Expected learning outcomes: the learner is able to identify, protect, know and care for his/her body for health

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> self-awareness self-esteem effective communication interpersonal relationships friendship formation critical thinking mobility orientation & rehab | <ul style="list-style-type: none"> acceptance creative thinking critical thinking self-awareness self-esteem effective communication coping with emotions assertiveness interpersonal relationships mobility orientation & rehab | <ul style="list-style-type: none"> interpersonal relationships self-esteem problem solving creative thinking self-awareness assertiveness coping with emotions decision making empathy critical thinking effective communication mobility and orientation |
|--|--|---|

Primary 3

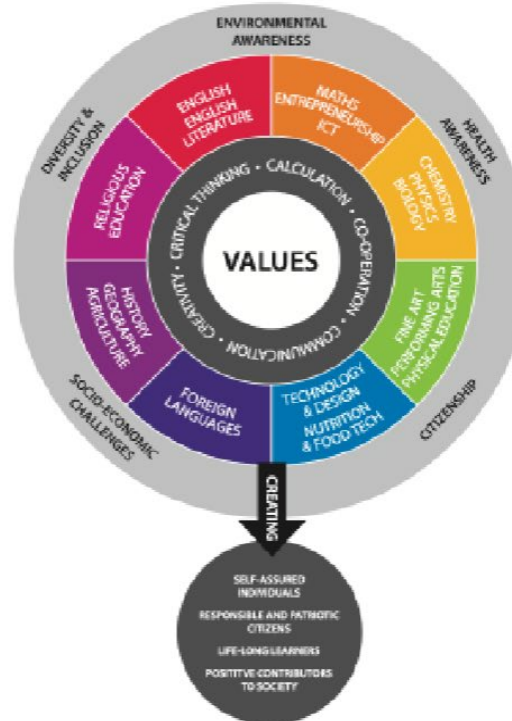
Note. Similar theme, different 'skills' across two year levels

Theme 10: Health in our sub-county/division

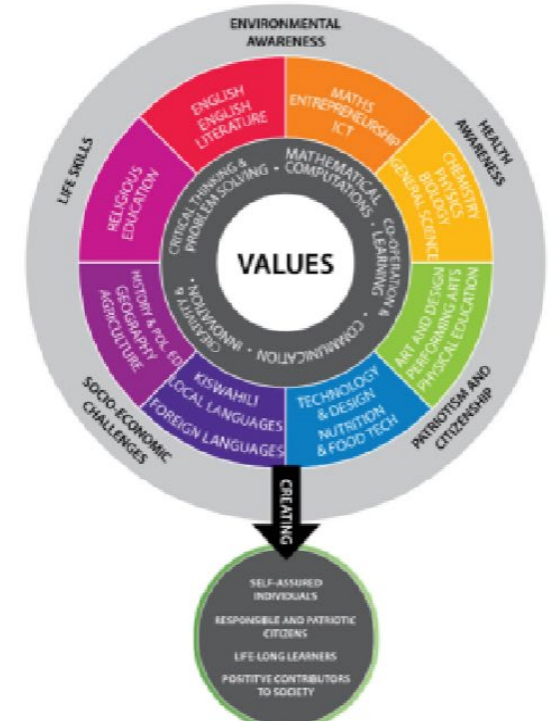
Expected learning outcome: the child demonstrates knowledge and skills of preventing common diseases and controlling them for a healthy life

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> effective communication critical thinking decision making problem solving soulfulness assertiveness mobility and orientation | <ul style="list-style-type: none"> effective communication critical thinking creative thinking decision making problem solving orientation self-awareness | <ul style="list-style-type: none"> effective communication creative thinking critical thinking decision making empathy problem solving coping with stress |
|--|--|--|

Resources: Primary 1 (reprint 2016); Primary 3 (2008)



NCDC (Jan, 2020). Lower Secondary Curriculum Framework



NCDC (Jan, 2023). Proposed Upper Secondary Curriculum Framework

The Development Process

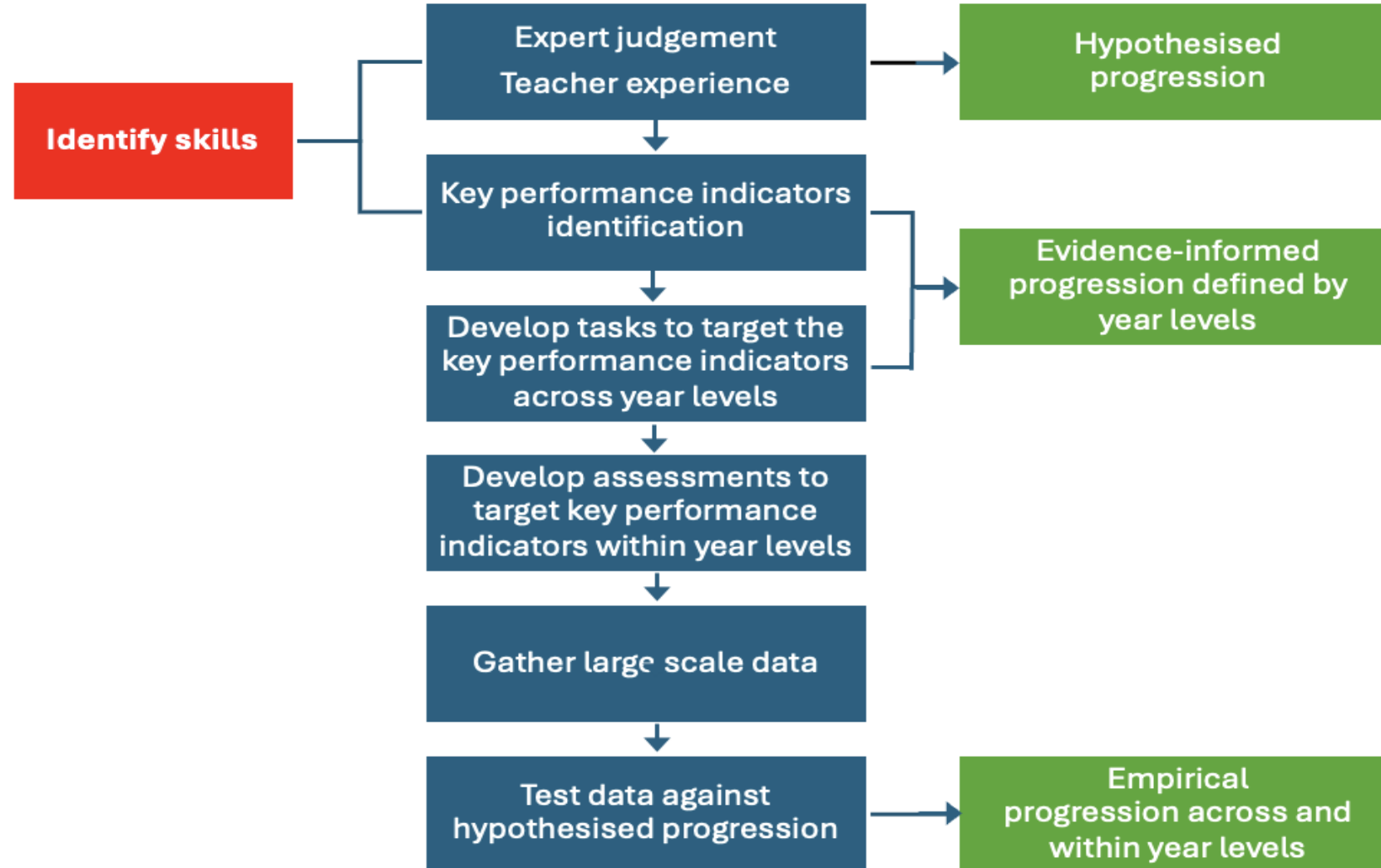
Appreciating the process
and understanding the
need

Agreement with NCDC & UNEB on need for development of learning progressions to resolve these issues.

Agreement on 3 skills (PS, creative thinking, cooperation) of focus -existing in both levels

- Agreement on format to take -evidence informed LPs
- learning by doing for further adaptability

Learning Progressions



Developing learning Progressions.....the Process

Appreciating the process and learning by doing

- Constituting teams
- Introducing the process
- Skills identification (definition, description, structure, performance indicators, learning progression) -to fill the gap of undescribed skills
- Understanding of how these skills develop or progress through the learning levels - from basic to more advanced

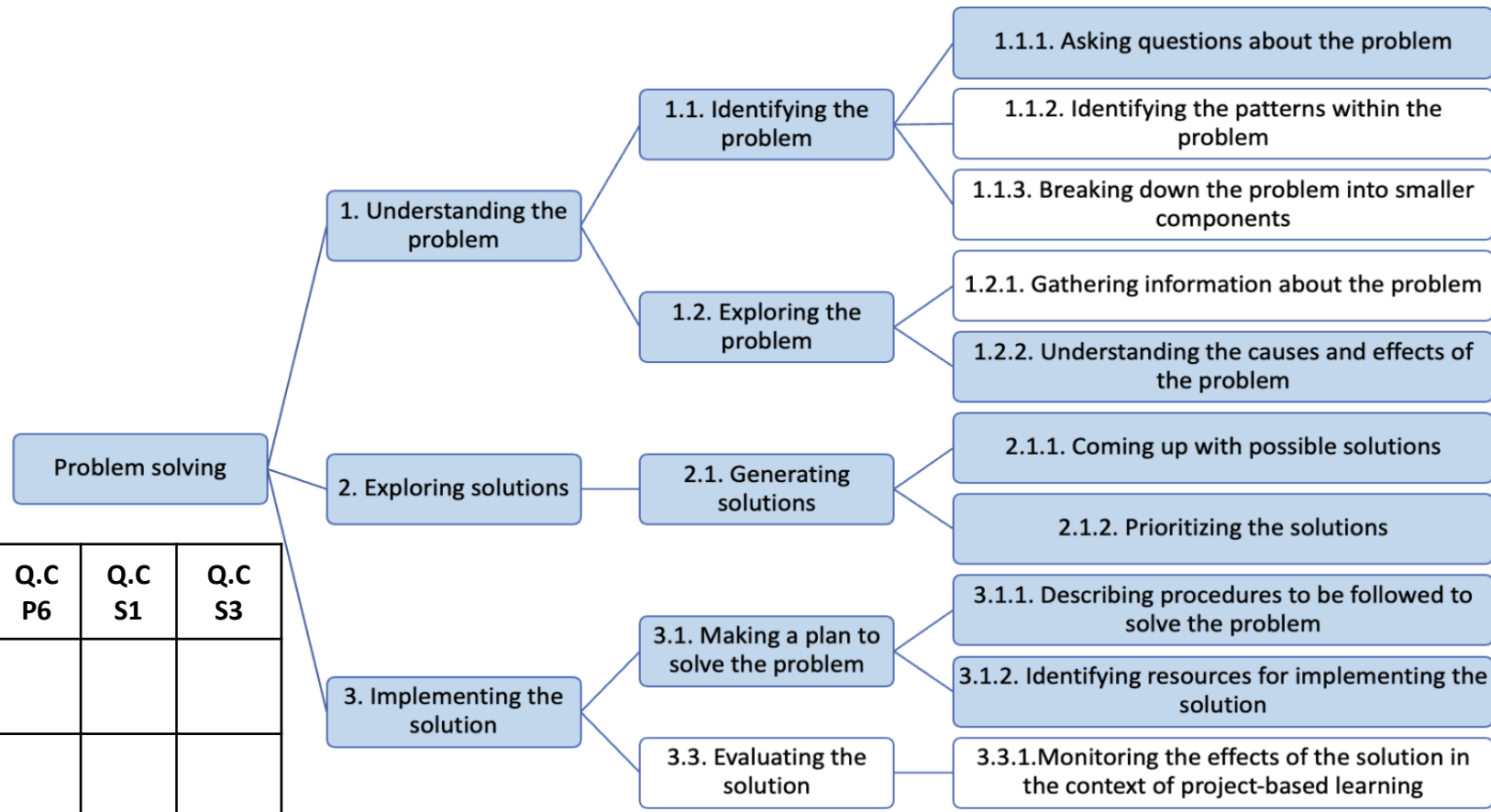
Key steps involved:

- LP hypotheses across 3 classes (P.6, S.1 S.3) determination -KPIs-observable behaviours learners can make, say, do or write
 - Checking/observing- verification of opportunities for KPI to be demonstrated in the classroom & at varying levels of proficiency (low-high)
 - Development of tasks -to target the skills -embedding skills in content of curriculum & how they will be assessed
- ↓
- Data collection and iteration
 - Data analysis - extent to which the tasks can differentiate between learners, and how learners respond to linked items across year levels
 - Finalisation of evidence-informed progression: development of skills frameworks and teacher guide



The journey through- problem solving

Skill	Dimension	Subskill	Indicator
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Dimension	Subskill	Indicators(PI)	Q.C P6	Q.C S1	Q.C S3
1 Understanding the problem	11 Identify the problem	111 Ask questions about the problem			
	12 Explore the problem	122 Understand the causes and effects of the problem			
2 Exploring solutions	21 Generate solutions	211 Come up with possible solutions			
		212 Prioritize the solutions			
3 Implementing the solution	31 Make a plan to solve the problem	311 Describe procedures to be followed to solve the problem			
		312 Identify resources for implementing the solution (people, time, money, etc)			

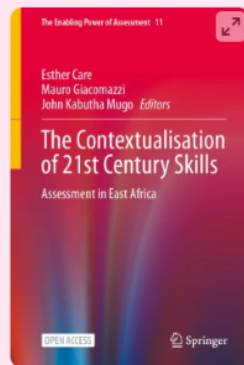
Lessons so far

- While learning by doing, context matters and is crucial for adaptation (competences in context & context-relevant items)
- Capacities for integrating LS in content is still a challenge
- Attitude and mindset shifts is central to the process. Rigidity on practices used -focus on business as usual-ease of dealing with content
- Item development challenges need to be identified early and managed- balancing trigger of demonstration of content and skills at a similar level (responses that trigger a balance)

The Contextualisation of 21st Century Skills

Assessment in East Africa

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Overview

Editors: [Esther Care](#), [Mauro Giacomazzi](#), [John Kabutha Mugo](#)

- Demonstrates how to build agreed understandings of 21st century skills
- Highlights the intersection of culture, values and beliefs, with 21st century skills
- Includes case studies illustrating concepts introduced in the book
- This book is open access, which means that you have free and unlimited access

Websites

1. <https://www.alive-reli.org/>
2. <https://reliafrica.org/alive/>
3. <https://ziziafrique.org/>
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Q&A

