FORMATIVE STUDY ON THE UTILISATION OF LEARNING ASSESSMENTS IN TANZANIA

Research Report

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Research report

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List of Abbreviations

ALiVE	Assessment of Life Skills and Values in East Africa
CONFEMEN	Conférence des ministres de l'Éducation des États et governments de la Francophonie
DFID	Department for International Development
ECE	Early Childhood Education
EGMA	The Early Grade Mathematics Assessment
EGRA	The Early Grade Reading Assessment
EQAP	Educational Quality and Assessment Programme
ERCE	Regional Comparative and Explanatory Study
ESA	Education Sector Analysis
FGDs	Focus Group Discussions
GESCI	Global e-Schools and Communities Initiative
HEIs	Higher Education Institutions
IDRC	International Development Research Centre
ICCS	International Civic and Citizenship Education Study
ICILS	International Computer and Information Literacy Study
IEA	International Association for the Evaluation of Educational Achievement
KIX	Knowledge Innovation Exchange
LA	Learning Assessment
LaNA	Literacy and Numeracy Assessment
LANES	Literacy and Numeracy Education Support
LLECE	Latin American Laboratory for Assessment of the Quality of Education
MELQO	Measuring Early Learning Quality and Outcomes
MZF	Milele Zanzibar Foundation
MoEST	Ministry of Education Science and Technology
OECD	Organisation for Economic Co-operation and Development
PASEC	Programme for the Analysis of Education Systems
PEDP	Primary Education Development Programme
PILNA	Pacific Islands Literacy and Numeracy Assessment
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Education Quality
SEA-PLM	Southeast Asia Primary Learning Metrics
SIDA	Swedish International Development Cooperation Agency

SSA	Sub-Saharan Africa
TALIS	Teaching and Learning International Survey
TERCE	Third Regional Comparative and Explanatory Study
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Executive Summary

Global e-Schools and Communities Initiative (GESCI) is implementing a two-year project "Adapting Assessment into Policy and Learning (ADAPT): Adolescent 21st Century Skills in Kenya, Uganda and Tanzania" in collaboration with Makerere University and The University of Notre Dame's. The project aims to promote the acquisition of 21st-century skills for adolescents by strengthening the use of data from learning assessments in curriculum design, adaptation, and delivery.

To realise the project objective, it was important to conduct a formative study to establish how past learning assessments have been used to influence policy and practice across the countries as well as establishing the barriers and enablers for evidence-based decision-making in education. Study findings are meant to inform the use of the Assessment of Life Skills and Values in East Africa (ALiVE) learning assessment results along those implementing the ADAPT project. In Tanzania, data were collected from policymakers at the national level, middle level (regional and district), learning assessments actors particularly development partners and practitioners such as NGOs, research institutions, teacher education colleges and schools. The study was qualitative with a total of 76 participants, 25% being female. It was also important to review government reports and publications to enrich the study findings.

Findings show that one stage of the policy-making process is agenda setting, where an issue to be discussed brings a public dialogue among different actors, with the discussions pushing for policy reforms. In Tanzania, learning assessments results from actors such as UWEZO, Research Triangle Institute (RTI) and development partners particularly UNESCO, UNICEF and the World Bank brought about public dialogue with the outcomes bringing policy reforms. UWEZO, for example, for six consecutive years (since 2010) conducted the citizen-led learning assessment. The findings show that children are in school but are not learning. The RTI conducted Early Grade Mathematics Assessment (EGMA) and Early Grade Reading Assessment (EGRA) learning assessments in 2013 and 2016. UNESCO, UNICEF, the World Bank as development partners conducted another learning assessment Measuring Early Learning Quality and Outcomes (MELQO) in collaboration with the National Examination Council of Tanzania (NECTA) in 2015.

The findings from these learning assessments prompted the review of the early grade curriculum to enable for the mastery of the Reading, wRiting and aRithmetic (3Rs) among children with this supported with continuous professional development of early grade teachers. The learning assessments further, made the government see the relevance of having a national learning assessment, with the first national Standard II learning assessment being conducted in Tanzania in 2019. Accordingly, while the former learning assessments did not assess skills, the National Standard II learning assessment adds another K[1] in the KKK[2], enabling for the assessment of skills at this grade.

The Tanzania Education and Training policy (ETP) 2014 was also put in place

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[1] Kuishi meaning to Live, impliedly Life Skills
[2] Kusoma, Kuandika na Kuhesabu (KKK) is the Swahili translation of Reading, wRiting and aRithmetic (3Rs)

following a review of the former policy. This led to the introduction of a compulsory early grade education (pre-primary education) in all public schools with this beginning in 2016, also aligning to the Sustainable Development Goal 4 target 2, which ensures that, by 2030, "all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education"[3]. The findings from the learning assessments by and large informed these decisions. The other use of the learning assessments findings includes the design of project interventions such as capacity building programmes to different beneficiaries by different actors, particularly research/education institutions and NGOs and allocation of regions for project interventions. Findings from learning assessments also input the development of Education Sector Development Programmes.

Overall, learning assessment findings contribute to education sector reforms at the policy and at the practice level. Accordingly, the key to success towards effective use of learning assessment results include wider dissemination of the results to diverse actors, especially to the middle level policymakers. Furthermore, the data collection process must be rigorous and should be supported by a robust tool and an extensive analysis of the assessment findings for diverse audiences and end users. Having an institutional policy for dissemination and monitoring of the development as arising after dissemination is also a key towards effective utilisation of learning assessments. There is also a need to strengthen the capacity of teachers and other education stakeholders for effective development, utilisation and assessment of the life skills at the school level. This is important now that skills are not integrated in the teacher education curriculum as an explicit subject. Related recommendations are also provided through the reviewed literature.

Regarding the adoption of life skills learning assessment such as ALiVE, challenges such as the conceptualisation of skills among the diverse stakeholders has to be harmonised. ALiVE seems to be the only tool that measure skills considering the Tanzania context and it must be more advocated for the stakeholders to be aware of its availability. There is also a need to coordinate existing initiatives meant to address skills development to have one voice when it comes to skills development and assessment.

At the moment most providers of the skills development programmes, largely NGOs are not coordinated besides having a long collaboration with public schools. Government is, however, supportive of the skills initiative endeavours and with the ongoing curriculum review, progress towards skills development and assessment is foreseen.

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[3] Global Monitoring Report, UNESCO, SDG Goal 4. Available: http://en.unesco.org/gem-report/sdg-goal-4

Chapter 1: Introduction

1.1 Project background

"Adapting assessment into policy and learning (ADAPT): Adolescent 21st Century skills in Kenya, Uganda, and Tanzania" is a two-year research initiative by Global e-Schools and Communities Initiative (GESCI), Makerere University's College of Education and External Studies (CEES) and the University of Notre Dame's Global Centre for the Development of the Whole Child.

The project aims to promote the acquisition of 21st-century skills for adolescents by strengthening the utilisation of data from learning assessments in curriculum design, adaptation, and delivery. The project specifically seeks to;

- Generate lessons from past and present national and regional learning assessments and initiatives to enhance national data-driven decision-making.
- Build capacity of a dynamic learning community to integrate and assess 21st Century skills and support the use of learning assessments at the school and sub-national (district/county/region) levels.
- Mobilise policy uptake on the utilisation of learning assessments in the education plans, curriculum frameworks, and teacher development.

The project is funded by the Global Partnership for Education (GPE) and International Development Research Centre (IDRC) under the Knowledge Innovations Exchange (KIX) Programme.

1.2 Study objectives

The project is implemented in line with the three main components as articulated in the KIX impact framework namely knowledge generation, knowledge mobilisation and capacity building.

Under the knowledge generation component, the initiative aims to generate usable knowledge on the best ways in which the link between learning assessment data and curriculum design, adaptation and delivery can be strengthened at the national level.

The formative study aimed to establish how past learning assessments have been used to affect policy and practice across Kenya, Uganda and Tanzania. The formative study aimed to establish how the utilisation of the existing learning assessments can inform and better support the utilisation of initiatives such as Assessment of Life Skills and Values in East Africa (ALiVE)[4]. The research specifically sought to gather data on the following.

- What are the lessons about national data-driven decision-making from past and present national and regional learning assessments in East Africa?
- How can we use the learnings from past assessment experiences to establish and strengthen a dynamic learning community in East Africa?

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4 ALiVE is a learning assessment model developed by the Regional Education Learning Initiative (RELI) network. The project ADAPT intends to strengthen the utilisation of the ALiVE LA findings for improved policy reforms and practices

- Who are the key actors and networks within the educations systems of the three countries, and how do they work in as far as utilisation of learning assessments is concerned?
- What are some of the best practices, successes, challenges, and barriers to the utilisation of learning assessments across the three countries?
- What are the best ways in which to support policymakers at the national level to integrate the ALiVE learning assessment into data-driven decisions to improve curriculum design and delivery?

This document presents the formative study report (Kenya/Uganda/Tanzania) and provides a comprehensive analysis of the key learnings from past experiences and recommends doable recommendations to support the strengthening of the use of learning assessment data in educational planning and policy.

Chapter 2: Study approach and methodology

The overall study design and methodology was negotiated and agreed upon by the country-specific research teams through an iterative process. The design was agreed in cognisance of the fact that the research was being implemented in three countries and as such there was a need to adapt an almost similar approach to allow for comparability of findings across the three countries. Qualitative approaches were mainly used to collect both secondary and primary data.

2.1 Methods

Literature review

First, a systematic desk review was undertaken to among other things to inform on the learning assessment landscape, the key actors (practitioners, providers, and users), and the use of the findings, challenges, and opportunities in Kenya/Uganda/Tanzania, as well as within the East African region to some extent in the case of regional assessments.

The desk review also informed the design of the study tools, which was done in collaboration with the ADAPT teams across the three countries. The tools formed the basis for collecting qualitative data through in-depth interviews.

Primary data collection

Primary data was collected using two qualitative research strategies, namely key informant interviews (KII) and focus group discussions (FGDs).
Purposive sampling was used to select the most relevant key informants from the Ministries of Education, examination councils/boards, curriculum development institutes, teacher employment and management authorities, non-state actors including international agencies, civil society organisations and individual experts. The FGDs were carried out with selected teachers.

A preliminary list of institutions and individuals was generated through the literature review, brainstorming and consultations with the project team. Snowballing techniques was then used to expand the list and reach other relevant participants.

Both face-to-face and telephone interviews were used to collect data. Table 1 summarises the profile of the participants. In total, 76 participants (25% female) were interviewed in this study, for the case of Tanzania.

Table 1: Study participants

Participant category	Institution (s)	Male	Female	Total
Policymakers	MoEST, PO-RALG	6	0	9
Educational agencies	TIE, ZIE, NECTA, ZEC, Tanzania Teachers' Union, Department of Teacher Education (DTE), Chief Inspector of Education (CIE)	3	4	7
CSOs/NGOs	TAMASHA, Shule Bora, Jifunze Uelewe, UWEZO, Haki Elimu, FEMINA, CAMFED, Digital Opportunity Trust (DoT), Launch Pad	5	4	9
Development partners	World Bank, British Council, ILO, UNICEF	6	1	7
RELI Network	GESCI, MZF, GLAMI, Sazani Trust	3	1	4
Research Institutions	REPOA, UDSM DUCE, SUZA	5	1	6
Middle level policy makers (DEOs, WEOs, HoS)	Selected primary and secondary schools (Temeke and Ilala - Dar es Salaam and Kisarawe – Pwani districts)	6	4	10
Teacher Resource Centres (TRCs), Teacher Colleges (TC)	Three selected TRCs (Temeke and Ilala) and seven TCs (Tabora, Shinyanga, Mpwapwa, Mandaka, Monduli, Patandi and Marangu)	10	1	11
Teachers (pre-primary, primary and secondary)	Selected schools in Temeke, Ilala and Kisarawe districts	9	7	16
Total		53	23	76

2.2 Data quality, Management and Analysis Plan

To achieve high standard and control of data quality, the qualitative data were audio recorded. Participants consent was sought before any recording. Interviews were transcribed and validated by data analyst to ensure the matching of the translations with the audio.

Thematic analysis was used as per the study objectives. Where possible, participant's voices are reflected on the report to illustrate points but also bring rigour to the narration. The analysis of the cases further enriches the learning lessons and recommendations to inform the utilisation of the present and future learning assessments.

Chapter 3: Learning Assessments' Landscape

3.1 Global perspectives and Framing

3.1.1 An overview of Learning Assessments

Assessment of learning forms the critical element of any education sector monitoring plan. According to Best, Knight, Leitz, Lockwood, Nugroho and Tobin (2013), learning assessments[5] provide information on a country's educational outcomes, which, in turn, assists policymakers and other stakeholders in making policy and resourcing decisions for improvement. Learning assessments provide evidence supporting inferences and claims about how well students are learning and how they are developing competencies (National Research Council, 2001). Learning assessment is thus a systematic approach to obtaining feedback from students, educators, parents, policymakers, and the public about the effectiveness of educational service with the findings guiding the learning process and supporting integrated educational improvement (Bialik, Martin, Mayo, and Trilling, 2016).

3.1.2 Models of Learning Assessments

Globally, governments and key education stakeholders have established practices and approaches for rolling out large-scale assessments and examinations for gauging improvement of learning outcomes and quality of education (Phil Elks, 2016). The approaches range from national examinations to cross-national and international assessments. Both types of assessments can be administered at small scale, for example, within the national or regional scope or large scale at a cross-national level (UNESCO, 2006). Such approaches have provided rich data and offered meaningful comparisons with which to analyse education policies and their implementation. To evaluate learning, assessment tools, particularly, tests which are classroom-based, national or public examinations and large scale assessments mostly administered at the national, regional and international levels, are designed for the purpose. While classroom test can be formative or summative[6]; public examinations are used for certification and selection purposes (Anderson, 2019). Public examinations also signal students' transition levels demonstrating government's commitment to provide quality education[7]. Public examinations further obtain adequate information on student learning outcomes[8]; assess schools regarding the implementation of the curriculum and teachers' ability to deliver appropriately.

National assessments can be used for system-level analyses within countries with the results measuring how well students in the system are learning while explaining why some students are performing better than others. Regional and international

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[5] Mainly assessing mathematics, language, science and civic and citizenship education as major constituent of primary education curriculum across nations (Kamens and McNeely 2009).

[6] Formative tests (homework, quizzes, projects, and presentations), also termed as assessment for learning establish, if learning is taking place and are used by teachers to improve learning and teaching. They also signal the need for adaptations to teaching programme at the school level by teachers. Summative tests (conducted bi-annually, annually, semester), also termed as assessment of learning, determine whether students have acquired the required knowledge and skills. Summative tests determine the effectiveness of a teaching programme.

[7] The Tanzania National Qualification Framework, for example, comprises of 10 levels from certificate of primary education (Level 1) to doctoral qualification (Level 10) (TCU, 2010). The Tanzania education system comprise of 2-7-4-2-3+meaning two years of pre-primary, seven years of primary, four years of secondary, two years of high-level secondary and three-plus years of university education, except for the pre-primary level, all other levels have an exist certification level.

[8] Usually held at major transition points such as from primary to secondary, for selection and certification purposes, and national assessment surveys at national level.

assessments (cross-national assessments) can be used for comparative assessment across countries. According to Sui-chu Ho (2012), international assessments help countries evaluate strengths and weaknesses of their education system against international benchmarks. Besides measuring specific skills or domains, large scale learning assessment gather information regarding the background of students, teachers, and learning environments allowing data to be analysed and correlated to inform policy decisions.

Accordingly, learning assessments can be authorised by a) the government such as national examinations; b) civil society driven [9] such as UWEZO (UNESCO, 2021)[10]; c) donors (donor-led assessments) such as USAID's Early Grade Reading Assessment (EGRA), Early Grade Mathematics Assessment (EGMA), and Measuring Early Learning Quality and Outcomes (MELQO) and d) regional assessments like the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) (Phil, 2016). The EGRA/EGMA learning assessments (LAs) are used in primary schools (RTI International, 2008; Anderson & Sayre, 2016; RTI International, 2018). EGRA helps to establish national reading performance and the level of children's reading skills. EGMA assesses mastery in numeracy among early grade learners and MELQO measures child development and learning as well as the quality of learning environment (Anderson & Sayre, 2016). Through the Measure of Development and Early Learning (MODEL) module of the MELQO initiative, besides mathematics and literacy skills, students are assessed on self-regulations, attention, and social-emotional development. Also, through the Measure Early Learning Environment (MELE) module of the MELQO, the ability of students to communicate is assessed based on the way in which they interact with teachers. According to Anderson (2019), early grade assessments examining mainly foundational literacy, numeracy skills and reading as well as citizen-led tests are not designed to be comparable across countries, but rather used by the practitioners to predict competencies that children need for future success thus providing remediation in the early grades.

Besides the approaches, classroom-based assessments, which are teacher-designed, have been reported to be one among the most important strategies for assessing learning. Classroom-based assessments provide rich and timely student level formative insight into learning progress enabling teachers to make teaching improvements or tailor instruction. They also offer opportunities for evaluating a wider range of competencies (Price and Light, 2011).

3.1.3 International Large Scale Learning Assessments

Large-scale learning assessments (LSLAs) refer to national or cross-national[11] standardised[12] testing designed to measure a specified group of population or similar age group (learners, schools, teachers) at a particular stage of education each year in a limited number of learning domains (life skills, reading or literacy, mathematics or numeracy, science) (UNESCO, 2006; Wagner et al., 2012). Accordingly, LSLAs evaluate the output of an education system through instruments that provide evidence about the levels of student achievement in specific learning domains. LSLAs have been advocated by the Education for All (EFA) Framework of Action that demands the need to apply systems of acceptable levels to assess the acquisition of

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[9] Also termed as house-hold and citizen-led which can be both in and out of school children
[10] https://bangkok.unesco.org/content/citizen-led-assessments-model-evidence-based-advocacy-and-action-improve-learning
[11] comparative multi-country assessments
[12] consistency in test design, content, administration and scoring to ensure comparability of the results across students and schools (deLandshere 1997)

learning for educational programmes to improve learning achievement. Findings from the LSLAs provide evidence that can inform policy, practice and decisions (Bello, Daramola, & Yusuf, 2017; Bruckauf & Chzhen, 2016). With the EFA framework, several LSLAs have been designed and piloted in different countries worldwide in collaboration with subject specialists and special interest NGOs (UNESCO Bangkok, 2010) and international organisations and development partners (UNESCO, 2006; UNICEF, World Bank, 2004).

At the global level, the UNESCO Institute for Statistics (UIS) identified nine cross-national learning assessments that meet the criteria to measure the proportion of children and young people achieving minimum proficiency in reading and mathematics as follows: PISA, TIMMS and LaNA as international LSLAs and SACMEQ, PASEC, ERCE, SEA-PLM, ERCE and PILNA as regional LSLAs (see UNESCO-UIS, 2018). Each is abbreviated under the abbreviation section. Some of these LAs are further discussed.

PISA, administered by the Economic Co-operation and Development (OECD) measures the skills and knowledge of 15-year-old students, particularly the ability to apply their reading, mathematics, science knowledge and skills to meet real-life challenges. PISA also adds the participants' contextual information for further analysis. The test is administered every three years to students from randomly selected schools worldwide where they take tests in reading, mathematics, and science, with an additional focus on one subject in each year of assessment. Lockheed, Prokic-Bruer and Shadrova (2015), established that donors use PISA results in dialogue with middle-income countries with the main reported effects related to agenda setting and expressions of intentions to reform curricula, standards, and teacher professional development. PISA for Development Project further build country capacity in assessment, analysis, and use of results for monitoring and improvement among participating countries. PISA results have also influenced policy reforms in specific countries. For instance, the PISA results in Germany, led to several reforms in the country's educational system, whereby schooling system has become more standardised and centralised, more closely monitored, and less segregated than at the time before PISA 2000 (Waldow, 2009).

Trends in International Mathematics and Science Study (TIMSS) is a research study conducted by the International Association for the Evaluation of Educational Achievement (IEA) to measure mathematics and science achievement at Grades 4 and 8. According to Mulongo and Amod (2017), IEA conducts large-scale comparative studies of education across the globe to inform educators, policymakers and parents on how students perform[13]. There exist TIMSS Numeracy assessment[14] (designed to be administered at Grades 4, 5 or 6), which concentrates on measuring numeracy learning outcomes, including fundamental mathematical knowledge, procedures, and problem-solving strategies and TIMSS Advanced which measures trends in advanced mathematics and physics for final-year secondary-school students. TIMSS further collects information on curriculum and its implementation, instructional practices and school resources. Countries have been using TIMSS results to refine

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[13] According to Suter (undated), several repeated large-scale assessments have been carried out by IEA; TIMSS (1994), also repeated in 1999 and in 2003. TIMSS (2019) for example focused on Australia, Belgium, England, Finland, France, Germany, Israel, Japan, Netherlands, Scotland, Sweden, and the United States.
[14] For countries where students are still developing fundamental mathematics skills

their expected standards, make curriculum reforms, reallocate resources, modify classroom practices, and improve school-community linkage (Kellaghan, Greaney and Murray, 2009).

Other international LSLAs include Systems Approach to Better Education Results Service Delivery – Service Deliver (SABER-SD) coordinated by the World Bank and Teaching and Learning International Survey (TALIS) by the OECD. SABER-SD is a new global lead indicator of learning aimed at monitoring the Sustainable Development Goal of achieving universal primary education (World Bank, 2019). The SABER-SD indicators provide a set of metrics to benchmark the performance of schools while at the same time tracking progress within and across countries to monitor service delivery and increase public accountability and good governance.

TALIS, first performed in 2018[15] aims at improving educational policies and outcomes by assessing the teaching workforce, the conditions of teaching and the learning environments. TALIS findings formed the basis for policy information regarding conditions for shaping effective learning from the teachers and school leaders' perspectives. Findings from TALIS further informed about the need for individualised and targeted continuous professional development programmes for teachers versus system-wide interventions previously dominated the education policy.

The Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) works with 15[16] education ministries in southern and eastern Africa to build their capacities, sharing experiences and expertise in scientific monitoring and evaluation of policies on school conditions and the quality of their basic education systems. SACMEQ administers tests in mathematics, science and reading with the test administered to Grade 6 pupils. SACMEQ also collects background information on students' schooling and home environments. It also measures both students and teachers' ability in numeracy and literacy as well as levels of basic health knowledge (Dohn, 2007). SACMEQ has happened in phases; SACMEQ I (1995-99); SACMEQ II (2000-2004); and SACMEQ III (2006 – 2011). SACMEQ also encourages collaboration among SACMEQ national research coordinators to share and exchange skills and successful experiences (Yu, & Thomas, 2008), with the collaboration improving individual countries' learning outcomes (Dohn, 2007).

Programme for the Analysis of Education Systems (PASEC) is a regional assessment (an education system support and management) tool designed for Francophone countries in West Africa and Asia. The assessment aims to support the steering of Conférence des ministres de l'Éducation des États et governments de la Francophonie (CONFEMEN) member states and governments' education systems[17] to improve education quality. PASEC provides information about the effectiveness and performance of education systems with the findings contributing to the development of primary school education achievement (at Grade 2 and Grade 6) and monitoring of education policy. Since its establishment in 1991, more than 20 African and Asian countries have been supported by PASEC in conducting national

evaluations. PASEC 2014 (PASEC, 2015), for example, involved 10 countries[18] with the tool measuring pupil competence levels at the beginning and the end of primary school in their language of instruction and mathematics. The assessment further analysed the factors related to education system performance, particularly, contextual data from pupils, teachers and school headmasters. The findings provided decision-makers with relevant indicators and information on performance in reading and mathematics from the very beginning of schooling. The findings further aid decision makers to provide the remediation required thus improving the quality of teaching and learning, at the earliest possible opportunity.

Findings from the regional learning assessments as evidenced from PASEC and CONFEMEN promote dialogue between policymakers, people responsible for education systems planning, specialists and all stakeholders allowing for better ownership of evaluation results. The dialogue enables for a better use of the findings in the development and management of education policies. Technical support is also provided to member countries alongside developing national evaluation tools including the related mechanisms as well as the use of the evaluation results. PASEC also works to build a network for experience sharing on policy guidelines, education practices and the assessment of achievements. Since 2012, PASEC established international comparative evaluations for measuring learning outcomes, to better meet countries' needs with the new approach enabling the comparability of results across national assessments. The measurement of different countries' pupil competencies on a common scale, at the beginning (Grade 2) and end of primary (Grade 6), now enables better analysis and understanding of the effectiveness and equity of education systems, in line with other international programmes such as PISA, PIRLS, TIMSS or SACMEQ.

Other regional assessments include;
a) Regional Comparative and Explanatory Study (ERCE), which is coordinated by the Latin American Laboratory for Assessment of the Quality of Education (LLECE). ERCE assesses learning achievement placing focus on reading, mathematics and sciences along the curriculum learning goals as per the UNESCO Regional Bureau for Education in Latin America and the Caribbean. ERCE assessments also identify the factors associated with different levels of achievement, such as the socio-economic context, family life and personal issues, educational policies, and school processes. Findings from the ERCE (2019) (UNESCO, 2020), formed the basis of the debate on the design and implementation of curricula for students to realise complex levels of performance thus guiding the decision-making process.
b) Southeast Asia Primary Learning Metrics (SEA-PLM)[19], as a regional assessment was launched in 2012 by the Southeast Asian Ministers of Education Organisation (SEAMEO) Secretariat and the UNICEF East Asia and Pacific Regional Office (EAPRO) to assess learning outcomes at primary Grade 5 (UNICEF & SEAMEO, 2020). SEA-PLM tests adopt a literacy-based approach measuring and references common curriculum targets and content across Southeast Asian countries. SEA-PLM (2019) assessed three learning domains (reading, writing and mathematics) as well as a global citizenship module using contextual questionnaires. The tool

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[18] Benin, Burkina Faso, Burundi, Cameroon, Chad, Côte d'Ivoire, Congo, Niger, Senegal and Togo
[19] A partnership of the Southeast Asian Ministers of Education Organisation (SEAMEO), UNICEF and the Australian Council for Education Research (ACER).

further gathers information on educational context and participant attitudes. The results have been used to improve the region's measurement of learning outcomes, use of data and peer exchange on policies and practices (UNICEF & SEAMEO, 2020)

c) Pacific Islands Literacy and Numeracy Assessment (PILNA)[20], launched in 2014, provides data on literacy outcomes focusing on the three domains (writing, reading and numeracy) of students in years four and six in 14 Pacific Island countries. PILNA is administered by the Educational Quality and Assessment Programme (EQAP) of the Pacific Community and the UNESCO. The 2012 PILNA results revealed low levels of students' achievement in literacy and numeracy across the region. The findings led to the Forum of Education Ministers meeting to focus of improving literacy and numeracy across the region, also requesting a 2015 administration of the PILNA. The PILNA 2015 report showed slight improvements in both literacy and numeracy compared to the 2012 results (PILNA, 2018).

According to Anderson (2019, p. 7), "International and regional comparative assessments provide valuable cross-national data on student learning across countries and often facilitate capacity building and peer learning opportunities."

3.1.4 Benefits of cross-national learning assessments

On the one hand, the comparative national assessments cite the ability to document the poor performance of a country relative to others of similar levels of economic development and on the other hand, national assessments provide participating countries with data for policy and investment decisions necessary for human capital development (Greaney & Kellaghan, 2008; Lockheed in Wagner et al., 2012). On the development perspective, the national learning assessments build the technical capacities of the participating countries to carry out their own assessments such as for South Africa (see Mulongo and Amod, 2017). Furthermore, cross-national studies provide hands-on training and equip national staff of participating countries with skills to design and implement own large scale national learning assessments. The skills include test development, computer-based management and analysis of data, policy analysis and report preparation (UNESCO, 2006). Typical examples of the utilisation of national assessments according to World Bank (2004) report includes; MLA project where participating countries particularly Madagascar, Mali, Mauritius, and Morocco carried out their own studies after the national assessment. The national learning assessments further inform policy reforms with the same recommendations improving the quality of education when put into use (Wagner et al., 2012; World Bank, 2004). For example, the data cleaning methods used in SACMEQ (2012) were adapted for school census data in some of the participating countries. Likewise, countries participating in PASEC improved their capacity in test construction and in designing and implementing learning assessments. Accordingly, the impact of cross-national learning assessments on education development in developing countries have motivated regulatory and behavioural policy reforms, have helped create a learning environment in which assessment specialists have improved their technical skills and related performance and that they have helped increase transparency regarding education system outcomes and human capital development in the participating countries (World Bank, 2004; Wagner et al., 2012).

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[20] Happening in six countries Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Vietnam

Further studies on the impact of national assessments include those by Mulongo and Amod (2017) who established improved technical capacities in the public education sector in South Africa and Kenya to design and conduct independent large-scale learning assessments. Accordingly, the findings demonstrated a certain level of commitment by African countries to establish official structures necessary to design/implement and sustain a culture of monitoring learning outcomes through public funded large-scale learning assessments. The drawbacks of using the cross-national quantitative learning assessments to the target group is that the target group learners, teachers and countries are encouraged to adapt their behaviour to maximise perceived rewards even in instances of dysfunctional education systems. Other drawbacks include the impossibility of creating achievement tests that are culturally or educationally specific, control for hegemonic individual systems by multinational and donor institutions and remove the demoralisation of poor performing countries by the opponents (Barret, 2009; Goldstein, 2004).

3.1.5 The 21st Century skills as an emerging area of assessment

The drive to shift the pedagogical paradigm in education to prepare learners for success in the digital economy started at the beginning of the 21st century. The initiatives included the formation of the Partnership for 21st Century Skills in 2001 (California Department of Education, 2015) for identification of 21st century skills and a way to teach and assess them, which culminated into the development of the Assessment and Teaching of 21st Century Skills Framework (Griffin and Care, 2015). These developments are considered an important part of foundational work in the conceptualisation and development of 21st century skills on a global scale (Global Partnership for Education, 2020). Accordingly, the United Nations Sustainable Development Goals included one specific goal for education, seeking to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (United Nations, 2015). The idea, that learning should go beyond literacy and numeracy, to include a broader focus of skills, has found increasing acceptance in the international community (Global Partnership for Education, 2020), despite some researchers arguing that the education crisis of the 21st century is the failure of students, especially in low-income contexts, to read, write and perform basic arithmetic (Spaull and Hoadley 2017).

Regarding the conceptualising 21st century skills, life skills and values, the debate about the related frameworks and how they should be developed and assessed has existed over time (Hendricks, 1996; Ananiadou and Claro, 2009; Dede, 2009; Scott 2015; Joynes et al 2019; Van Laar et al 2020). The frameworks put emphasis on personalisation, collaboration, communication, informal learning, productivity, and content creation as fundamental to competences and skills with learners expected to develop them across disciplines (Suto & Eccles, 2014; Scott, 2015). The authors call for development of personal skills (initiative, resilience, responsibility, risk-taking, and creativity), social skills (teamwork, networking, empathy and creativity) and work skills (managing, organising, meta-cognitive skills, and altering perceptions of and response to failure) as vital for optimal performance in work places (Suto & Eccles, 2014; Scott, 2015).

The study will adopt the Dede (2009), P21's framework to conceptualise 21st Century skills. The framework is more robust and has been widely adopted making it the most important tool for conceptualising 21st Century Skills. The framework

highlights the relevance of the following key areas; the core subjects, 21st century content, learning and thinking skills, life and career skills as well as information, media, and technology skills, with each further elaborated.

a) Core subjects; the framework emphasises mastery of key subjects namely English, reading, or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics (Battelle for Kids 2019).

b) 21st century content; the framework provides guidance on new content areas, currently not a focus on schools that are important in shaping one's understanding of community, work environment and the world (Dede Chris 2009). These areas include global awareness, financial, economic, business, and entrepreneurial literacy, as well as health and wellness awareness.

c) Learning and thinking skills; these skills seek to equip students beyond academic content and help them to make effective use of their knowledge and skills for the rest of their lives. These skills include critical-thinking, problem-solving, communication, creativity and innovation, collaboration and contextual learning (Dede, 2009).

d) Life and career skills; these skills equip students with thinking skills as well as social and emotional competencies for complex real-world environments and challenges (Battelle for Kids, 2019). The skills include flexibility and adaptability; initiative and self-direction, social and cross-cultural skills, productivity and accountability, leadership and responsibility.

e) Information, media and technology skills; the skills prepare students for the information age we live in. They include information, media, and technology skills. Therefore, the framework highlights necessary skills in this domain as information literacy, media literacy and ICT literacy (Battelle for Kids, 2019).

In their review, Suto & Eccles (2014) point out that these skills can be developed through subject-based assessments (e.g. designing subject assessments using Blooms Taxonomy levels of cognitive domain, which would require students to analyse, evaluate, create etc.), skills-centred courses (i.e. offering a curricular that cover the 21st century skills explicitly, for example, offering critical thinking as a course in its own right, or learning ICT as a subject) and competency-based pedagogy (e.g. using learner-centred pedagogy) and working on independent projects.

3.1.6 Global, regional and local policies, strategies and initiatives towards the assessment of 21st Century skills within school systems and curricula and the related challenges

Evidence shows that both summative and formative approaches can be suitable to assess 21st century skills (Aghazadeh, 2019). Summative assessment methods include the following: rubric that provides criteria and degrees of quality and how they will be rated; performance-based assessment to gauge students' knowledge and ability to apply it in real-world situations; and portfolios, which allow a student to gather and submit a body of work during a period of time (Price, Pierson and Light, 2011). Formative assessment strategies for 21st century skills include self-assessment, which offers opportunities for students to reflect on their performance, peer assessment where learners assess each other's quality of work; and technology-based formative assessment tools where students instantly and anonymously respond to mixed questions and a teacher displays the responses on the projector or a screen (Price, Pierson and Light, 2011).

An important consideration when designing and integrating assessment of 21st

century skills in learning assessments is the efficacy of the assessment in establishing the extent that a student can cope with real world environment and challenges (Aghazadeh, 2019). A mix of assessment approaches that evaluate student performance across required competencies, while providing both an interactive learning experience with fellow learners and teachers, and a timely feedback mechanism that is integrated into the learning experience, will ensure that students gain and utilise 21st century skills (Rupp et al, 2010).

Examples of tools used for assessment of 21st century skills around the world include the ICT literacy test run by PISA and critical thinking tests, such as the California Critical Thinking Skills Test, the Cornell Critical Thinking Test, and the Watson-Glaser Critical Thinking Appraisal (Aghazadeh, 2019). The Assessment and Teaching of 21st century Skills (ATC21S) assesses collaborative problem-solving skills using a technology-based formative assessment. Accordingly, the use of technology tools, integrated into learning assessments for skills such as problem-solving has existed and has been practiced in some countries (Roskos and Neuman, 2012). Chapter 1 also discussed about the ALiVE initiative specifically meant for assessing life skills and values in East Africa.

Building on the previous chapter discussions, the existing learning assessments largely assess literacy and numeracy skills. However, the 21st Century skills embracing (critical thinking, collaboration, problem solving and creativity) including life skills and values are under-assessed (Anderson, 2019; Care and Kim, 2018). Voogt et al (2013) further argue that there is limited success in implementing strategies for teaching 21st-Century competencies in real learning settings. Given the relevance of skills for youth in their later life, various exposure and practical programmes have been designed to enable youth develop and utilise them. Wamahi and Bapna (n.d), p. 12-13) for example provides a list of organisations focusing on developing 21st century skills and a diverse list of skills they focus on, with limited information on their assessment.

Despite the initiatives to develop 21st century by various actors both government and non-government institutions, mechanisms for assessing the skills and the related tools are not widely disseminated. For example, the National Cooperative Extension System developed a life skills model placing emphasis on "4-H's" - Head, Heart, Hands, and Health with the same being integrated by Hendricks (1996) in the "Targeting Life Skills Model" in the Iowa State University Cooperative Extension Service. Few of these initiatives are integrated into the formal education system. The existence of few specific definitions of the 21st Century skills and competencies at national or regional level and the lack of a clear formative or summative assessment policies for these skills have continued to be a gap along the development and assessment of skills. Furthermore, besides the existence of several optional teacher training initiatives focusing on developing teachers' ICT pedagogical skills, few teacher training programmes target the teaching or development of 21st Century skills, with this being a gap to be addressed (Ananiadou and Claro, ibid).

Other challenges of assessing the 21st Century skills include their subjectivity and inexplicable nature which make it difficult to measure them objectively (Suto & Eccles, 2014). In developing countries contextual factors such as overcrowded

classrooms (Mgyabuso & Mkulu, 2022), resistance to change by teachers (Okenyi (2011) and language are among the challenges that limit the assessment of 21st Century skills (Sikoyo, 2010). It appears that challenges that are encountered by teachers and students when developing and assessing the 21st Century skills are, in a way, similar and may therefore require concerted efforts in addressing them. Sikoyo (2010) goes further by recommending that researchers in developing countries such as Uganda need to focus on helping teachers to devise strategies for teaching large classes (Sikoyo, 2010). The same could apply to other researchers in the region.

3.2. Notable Regional Learning Assessments

Tanzania mainland participated in the SACMEQ II project (1998-2004) and SACMEQ III (2005-2010) [21]. The objective was to apply scientific methods to monitor and evaluate the quality of education and generate research-based information for improvements purposes. SACMEQ II project results in Tanzania showed satisfactory performance of Standard 6 pupil achievement results for reading and mathematics. The Ministry of Education in Tanzania used the results to devise measures aimed at further improving the quality of education through the Education Sector Analysis and Annual Reviews. SACMEQ II results were also used by the respective Ministry to adjust the first phase of the Primary Education Development Program (PEDP I[22]), and in designing the second phase of the PEDP which commenced in 2007 (SACMEQ, 2011).

Anderson (2019, p. 38) further provides a list of the National and Cross-National Assessments in developing country partners, with the same happening in a total of 65 countries from 2010–2017. A review of the list shows that 63% (41 countries) have conducted early grade assessments particularly EGMA and EGRA; 17% (11 countries) have done citizen-led assessments with all the formative study countries participating particularly, Tanzania in 2012 and Kenya and Uganda in 2015. The list further shows that 17% (11 countries) have conducted international learning assessment with none happening in Tanzania, Kenya and Uganda. On the regional assessments, 38% (25 countries) have conducted PASEC, SACMEQ, TERCE and PILNA, with all the study countries participating in this research having conducted SACMEQ.

3.3 Notable Learning Assessments (LAs) in East Africa
3.3.1 National Learning Assessments in Kenya/Uganda/Tanzania

The major LAs in Tanzania include EGRA, EGMA and MELQO as further explained. Between 2013 and 2017, three successive rounds of EGRA were conducted in Tanzania, covering standards two and three, seeking to assess learner performance and teachers' ability to implement the 3Rs (reading, writing and arithmetic) programme (RTI International, 2018). The study was done in collaboration with representatives from the Ministry of Education, Science and Technology (MoEST), and the National Examinations Council (NECTA) as a government agency. While the final tool was retained by MoEST for future EGRA applications, the RTI's technical

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[21]https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwino-iczMP6AhVPaBoKHeqLDZAQFnoECC4QAQ&url=https%3A%2F%2Fnicspaull.files.wordpress.com%2F2011%2F04%2Fwd01_sacmeq_iii_results_pupil_achievement.pdf&usg=AOvVaw0YUEP6FkVrg-iJmtleD6AQ

[22] Aimed to achieve at improving the quality of education and contributing to the realization of the Education for All (EFA) goals through by realizing the following objectives; expansion of enrolment, improving the quality of learning outcomes, improving teacher competencies, and strengthening institutional management.

experts built the capacity of the MoEST and the NECTA team regarding tool design, administration and reporting of National LAs. Another national LA is MELQO. The assessment was coordinated by MoEST under the support of UNESCO, UNICEF, the World Bank and Centre for Universal Education at Brookings Institution and was conducted in 2015 (Anderson and Sayre, 2016). The use of EGRA, EGMA and MELQO results influenced the Ministry of Education and Vocational Training (MoEVT) to develop the National 3R programme through which curriculum was reviewed and a training programme for early grade teachers was rolled out with the support of Global Partnership for Education (Anderson & Sayre, 2016).

3.3.2 21st Century skills assessment in East Africa (Kenya,Uganda and Tanzania)

In Tanzania, the 2016 EGRA national assessment, integrated life skills[23] as a component, with the same funded by the United Nations National Fund. One element of the MELQO tool also assesses skills (Anderson & Sayre, 2016). A thorough review of the LAs as earlier discussed further shows that very few of these assessments focused on 21st Century skills. Accordingly, Anderson (2019, p. 17-19) explored the subject or domain assessed by these national assessments. Except for the International Civic and Citizenship Education Study (ICCS) and SEA-PLM which assesses civics and citizenship, the remaining assessments focus on early grade literacy (reading, writing and arithmetic), Science and Mathematics for upper grades to the age of 15. This impliedly indicate that few international, regional and national LAs assess 21st Century skills. As put by Mulongo and Amod (2017), the assumption is that skills are embraced in the broader curriculum goals, and thus impliedly assessed along the school-based tests and in specific subjects along the national examinations.

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[23] The life skills questionnaire can be accessed via this document: https://ierc publicfiles.s3.amazonaws.com/public/resources/2017%20TZ%20EGRA%20Instruments.pdf

Chapter 4: Study findings and conclusions
4.1 The policy-making process

Policy is a deliberate system of guidelines in the form of laws, regulations, procedures, administrative actions and practices used by governments and institutions as systems to guide decisions and achieve rational outcomes[24]. Haddad (1995, p. 18) defines policymaking as "an explicit or implicit single decision or group of decisions, which may set out directives for guiding future decisions, initiate or retard action, or guide implementation of previous decisions". In the education context, educational policies at the systems level may be concerned with any of the following aspects – curriculum contents, instruction delivery, resources allocation, learning assessment (including the use of data from the learning assessments), development of achievement standards (including teacher qualifications standards), and teaching and learning practices (Best et al (2013). Teaching practices relate to school-level practices, particularly, professional collaboration, student–teacher relationships, and teacher attitudes including job satisfaction and self-efficacy.

Regarding the policy formulation framework, the policy cycle comprises of five stages (Bridgman and Davis, 2004; Best et al 2013); (1) agenda setting, (2) formulation, (3) decision-making, (4) implementation and administration and (5) monitoring and evaluation. The policymaking cycle can, however, be messy now that different actors (donors, parliament, cabinet, ministries, private sector, researchers and donors) are involved. Figure 1[25] reflects the policymaking process, which reflects the interaction among actors involved. According to Lockheed, Prokic-Bruer and Shadrova (2015), the process uses data from learning assessments as evidence to inform decisions across all stages of the policymaking cycle. Each stage is further discussed reflecting how LA results are applied.

Agenda setting

According to Prokic-Bruer and Shadrova (2015) agenda setting (awareness of and priority given to an issue or problem), begins with public dialogue of policy issues by donors and private actors through media. Accordingly, the credibility of evidence and the way the evidence is communicated to the public that the issue demands a policy attention matters. Research underscores that education policymakers use data from learning assessment during the agenda setting stage (Best et al., 2013; Lockheed, 2013). For example, PISA and other international large-scale assessments have informed policy dialogue between countries and donors, as indicated by a review of World Bank projects. According to Best et al (2013), findings from the national assessments and recommendations from the international learnings assessments play a key role under the agenda setting stage.

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[24] https://en.wikipedia.org/wiki/Policy
[25] Adopted from the International Development Research Centre (IDRC) Monitoring, Evaluation and Learning (MEL) training: Conceptual underpinnings of KIX MEL:
https://www.youtube.com/watch?v=pl6c7JIWB0I&list=PLoDjWWcmJK68KAAha0UY6qdJPLdcutZfl&index=2
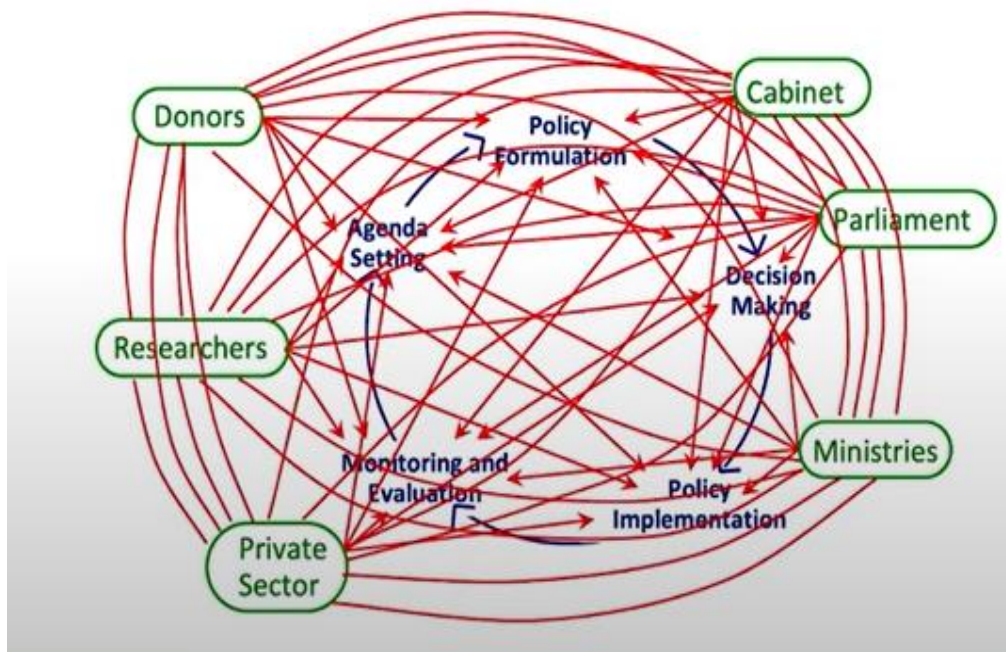
Figure 1: The policy-making process

Policy formulation

Policy formulation involves understanding the instrumental links between an activity and an outcome as well as the expected cost and impact of an intervention. The quantity and credibility of the evidence are also important under this stage (Anderson, 2013). Studies show that little is always considered from learning assessment data during the formulation stage of an education policymaking. Best et al (2015, p. 47) argues that under the policy formulation stage "large-scale assessments have the least impact on the ways in which analytical and political options and strategies for education policies are constructed". Evidence however, shows that some low-income countries use learning assessment data at the policy formulation stage. For instance, results from SACMEQ II were used in Seychelles to stop streaming policy at all levels of planning (Leste, 2005), which was contributing to students' poor performance.

Policy implementation

Research shows that when it comes to policy implementation, learning assessment results have been used (Tobin et al., 2015). The use of learning data allows for a more effective implementation, detecting learning challenges early on and targeting them with direct action (Tobin et al., 2015). It was the use of learning assessment data during implementation that the Learn to Read initiative launched by the education department in the Indian state of Madhya Pradesh in 2005 successfully led to improved students' reading proficiency from 2006 to 2010 (Tobin et al., 2015).

Monitoring and policy evaluation

This phase is also reported to be conducted based on data from learning assessment. Most often, the data used at this phase come from large-scale learning assessments such as PISA, EGRA, EGMA just to mention a few (Tobin et al., 2015). Elks (2016) notes that in Kenya, the government used EGRA assessments to monitor the

Tusome[26] programme, which is based on providing support to teachers through tutors visiting schools. Tusome is helping to build capacity while focusing on the specific task of improving learning outcomes (Elks, 2016). It is noted that Tusome was able to clarify expectations for implementation and outcomes nationally using benchmarks for Kiswahili and English learning outcomes, and all expectations were communicated down the hierarchy to the school level. According to Piper, Destefano, Kinyanjui, & Ong'ele (2018), Tusome went successfully because the essential programme inputs were provided fairly consistently, across the nation and that Kenya developed functional accountability and feedback mechanisms to track performance against benchmark expectations.

4.1.1 Research-based evidence for policymaking

International large-scale assessments have provided empirical evidence of the need for policy reforms to improve the quality and equity of education outcomes in numerous countries. They have also been occasionally used as key results' indicator for projects and programmes supported by donors. According to Sutcliffe and Court (2005), evidence-based policymaking process involves the use of rational and rigorous approaches and analyses to inform decisions. The approaches may include systematic review of the existing best practices (Best et al 2013), the use of learning assessments (Prokic-Bruer and Shadrova, 2015) and the use of frameworks to build and support a system of evidence-based policymaking by the government (Pew-MacArthur, 2014). The framework developed by Pew-MacArthur (2014, p. 1) comprises five key components; (1) programme assessment, (2) budget development, (3) implementation oversight, (4) outcome monitoring, and (5) targeted evaluation with each having multiple steps. The framework is used as a guide for governments to enable them to make better choices through evidence-based policymaking.

Programme assessment involves conducting a systematic review to establish available evidence on the effectiveness of public programmes to develop an inventory of funded programmes and the related potential return on investment. Budget development involves incorporating evidence of programme effectiveness into budget and policy decisions with priority given to programmes that deliver a high return on investment of public funds. While implementation oversight focuses on ensuring that programmes are effectively implemented as per the intended purpose and design, outcome monitoring is meant to ensure for a continuous measuring of the outcome data to determine whether programmes are achieving desired results. Target evaluation involves conducting rigorous evaluations of new and untested programmes with the findings informing continued funding for new initiatives. Other factors that influence evidence-based policymaking process include media (Lawrence, 2001). In this regard, media can move a subject onto the policy agenda when they give it extensive coverage and frame it as a problem.

Literature, however, indicates that the use of learning assessment data does not happen on equal footing at all levels of policymaking stages (Best et al., 2013). While PISA results have been used to support evidence-based policy-making in emerging and developing economies and contributed to the UN-led definition of global learning goals for the post-2015 agenda, direct impacts on policy reforms are more

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[26] Literally translated as "Let's Read"

inclined on high-income countries. On the evidence, information from PISA 2012 about country's learning results and social segregation of schools, for example, was used as important evidence in the debate, which led to the introduction of the inclusion law in some countries. There was also abolition of co-funding in publicly supported schools by parents, student selection, and profit-making in state-subsided schools (Cox & Meckes, 2016). With the new reforms, the assessment of knowledge was also abandoned, and the three dimensions assessed in the national reading tests became retrieving information, interpreting and making relationships (within and among texts) and reflecting upon texts (ibid). Some evidence for middle-income countries suggests effects of the learning assessments on curricula, performance standards and assessment. In Chile, education was made the country's main public agenda because of the annual publication of learning assessment (Meckes and Carrasco, 2010). The assessment aimed to gather information on the performance of Chile's education system compared to other countries, particularly those of first world nations, by showing a gap with high-income countries that could need to be bridged (Forster and Masters, 2010).

4.1.2 Awareness about Learning Assessment: The views of the formative study participants

Most of the interviewed participants, particularly the middle level managers including tutors, ward education officers, teacher resource centres, heads of schools and classroom teachers at the secondary and primary level narrowly perceive LAs as formative and summative assessments. According to their view, LAs comprise continuous assessments as conducted at the school level and national examinations as conducted at Grade IV, VII, Form II, Form IV and Form VI.

> *"The national learning assessments in our country are in a form of a continuous assessments (e.g. tests, quizzes, terminal and annual examinations) and summative assessments (e.g. NECTA) that are done at the end of an educational programmes…, enabling for selection and/or placement to another level…,"* **Ward Education Officer**

> *"Three main assessments are done…, assessment for learning, assessment of learning and assessment as learning…,while examination councils are responsible for assessment of learning (summative) as it prepares national exams, schools are responsible for the remaining two…,assessment as learning is given to a student before being taught while assessment for learning is given after teaching them…"* **National examination agency official**

Actors implementing national Learning Assessment (LA) view it as a benchmark that enable for a comparison of some indicators along the curriculum goals with other countries. LAs thus demonstrate a skill that describes an individual, it can also act like a gross domestic product (GDP) that describes a profile of a country.

> *"You know when you do your own assessment in this country for example Primary School Leaving Examination (PSLE) it doesn't tell you the performance of your own children in relation to others in another country. But LA uses international yardstick and tells where we are…and it uses a*

curriculum and the language of a given country ...you see, it is something like GDP...If you take the GDP [of country X] and [country Y] and [country Z] it can tell you that this country is richer than this one..., that's why many governments are so keen about LAs...If you remember [country T], decided to exit participation in PISA because it was painting them in a bad light...the country was not doing well comparatively...the politicians were..., you know the way the politicians are...so [country T] decided not to participate because in truth it was exposing them Expert and implementer of LAs"

4.1.3 Key actors in the LAs space

In Tanzania, the main actors of LAs are government agencies, particularly National Examination Council of Tanzania (NECTA), development partners such as UNICEF and UNESCO, NGOs such as TWAWEZA[27], donor funded programmes such as Education Programme for Results (EPfoR), Shule Bora[28] and Jifunze Uelewe [29]and research institutions such as Research Triangle Institute (RTI). While the UNICEF[30] and the RTI implemented EGRA/EGMA and MELQO as reflected under section 3.3.1, TWAWEZA has since 2010 implemented the UWEZO citizen-led LA. Accordingly, each of these actors happen to implement the assessments in collaboration with other actors including NECTA as a government agency. NECTA learning from the experience of these actors designed and implemented the first national Standard II LA in 2019 with the same funded by Literacy and Numeracy Education Support (LANES). In this regard, only one national Standard II LA has been administered in Tanzania.

"If you know the major providers of large assessment in this country usually have been two… it has always been either RTI who has been conducting EGMA/EGRA or TWAWEZA who have been conducting the UWEZO LA. But the government said no…we want to have that capacity to implement our own LA…then the national Standard II LAs began in 2019…after building its own capacity…," **CSO/NGO representative.**

The key stakeholders, especially the MoEST, the President's Office - Regional Administration and Local Government (PO–RALG) and development partners, specifically Department for International Development (DFID), Swedish International Development Cooperation Agency (SIDA) and the World Bank were engaged in this first national assessment to provide guidance, assistance and advice. Another key actor involved in this LA was EPfoR, which offered advisory role in all stages along the preparation of assessment guidelines and moderation of reading and arithmetic skills assessment tools to ensure comparability with those used in the 2016 EGRA/EGMA study.

"One of the major stakeholder or actor for any LA in any country is the government..., we worked with NECTA to implement the first national learning assessment with the same implemented in 2019-2020..., there was an agreement with the government that NECTA will do it…, so NECTA provided a group of experts from the examination department[31]. So, we worked with these individuals, we had a team of about 12 to 15 people from

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[27] Literally translated as "We can"
[28] Literally translated as "Quality School"
[29] Literally translated as "Learn to Understand"
[30] While NECTA initiative the idea and solicited funding for the assessment tablets including production of the assessment book manuals, UNICEF facilitated the workshops that enabled for the design of the first Standard two national assessment.
[31] Particularly Research and Evaluation unit

> *NECTA. And we had a series of meetings, workshops….of developing the tests, standardising the tests, administering the assessments, piloting the tests, doing sampling together, training the administrators, collecting the data together, report writing together…,"* **Expert and implementer of LAs**

According to EPfoR report (2020)[32], the idea of conducting the first national assessment was based on the education reforms that started in 2013 based on the Big Results Now (BRN) project[33]. Since then, several assessments have been conducted in 2013, 2016 for the case of EGMA and EGRA and 2019 for the case of the national standard II LA.

> *"LAs were not introduced long in Tanzania…, the trends of results as reflected from the EGMA and EGRA assessments show declining trends in performance at the national level…, there was no mechanism for diagnosing the declining trends in performance…., this led to the introduction of the national standard II LA, which is based on the curriculum of Standard 1 and 2, with the same aligning to international benchmarks…"* **National Education Agency Official**

This national Standard II LA assesses 3Rs and has added one skill named "Kuishi abbreviated as K"[34] to the previously used EGRA and EGMA tools. The K measures the speed and accuracy of a learner in performing a practical activity like cleaning of the environment, washing, etc.

> *"The fourth K measures children competence on awareness on health, environment, art (drawing, singing, masonry, sports, etc)…,for example, we measure how a child can wash a school shirt properly within certain minutes…,we established various life skills activities stipulating the time each has to be realised reflecting speed and accuracy…,the assessor uses this framework to assess a child…., example a child has to clean 10 square meter environment properly within ten minutes….,the assessor has to assess the quality of the cleanness in relation to the time spent and award a score …"* **National examination agency official**

While the EGMA and EGRA, tools are administered at some intervals (formative assessments), the national standard II assessment is a school-based assessments that happen on a continuous basis and can be administered daily.

> *"School based assessment can be administered on a daily basis…,a teacher can teach briefly and assess in a lesson…,a teacher can assess twice or thrice…,we have [thus] designed several questions to address all topics in grade one and uploaded them in a tablet…, students can be assessed throughout from the beginning of the topic…, towards the end…, with questions varying intensities as the topic advances…, the assessment is classroom based…,"* **National LA implementer**

Plans are there to develop LAs for other levels of education, but at some later stages.

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[32] file:///C:/Users/USER/Downloads/ife-case-study-5%20(1).pdf
[33] https://www.researchgate.net/publication/314468810_Big_Results_Now_Emerging_Lessons_from_Results-Based_Aid_in_Tanzania
[34] Kuishi is literally translated as Living, K thus assesses life skills in this national Standard II LA. The 3Rs in Tanzania are named Kusoma, Kuandika na Kuhesabu (KKK) meaning Reading, wRiting and aRithmetic (3Rs)

NECTA thus group national LA into three categories, Standard 2, Standard 4 and Form 2. There also exist placement assessments as done at Standard 7 and Form 4 national examinations. While the national LA for Standard 2 fits the international standards, other LAs are set with reference to the national curriculum standards.

"For Standard 2 LA, the benchmark is international with the assessment aligning to the EGMA and EGRA criteria. For Standard 4 and Form 2, we use the national benchmarks and the design of the assessment tools is guided by the national curriculum reflecting the level of the learners along a framework approved by the Commissioner of Education…,These national assessments are meant to identify learners' competencies, gaps and areas of intervention…,the Form Two assessments assess the extent to which learners acquire Form 1 and 2 curriculum content, they also enable learners to get a continuous assessment that contributes to Form 4 results…,we also have Standard 7 and Form 4 examinations, with these used for placement purposes…" **National Education Agency Official**

Assessment of learning, especially at early grades, is important as it signals individual future success and realisation of ones' future potential. Thus delayed remediation at this level will hinder the development of a child making it not possible for them to realise their full potential.

"Every learner who fails Grade Two assessment is likely to fail in the Standard Four national examinations, [thus] if nothing is done quickly, they won't be able to reach the university…since a LA is an indication..." **Expert and implementer of LAs**

The remaining sub-section discusses about the national assessment for Standard Two and the UWEZO citizen-led LA considering its administration as well as the dissemination and utilisation of the related findings.

4.2 Evidencing the use of LA in making decisions
4.2.1 The national assessment for Standard II (2019-2020)
Regarding the administration of the tool, the survey covered all the 26 regions and councils of Mainland Tanzania with the population comprising all Standard Two pupils attending public schools, which were selected randomly. The sample was selected to provide estimates of pupils' performance at the national and regional levels segregated by gender and urban/rural areas. In all, 524 schools from a sample frame of 11,273 (71.35%) public schools (324 rural, 200 urban) with a total of 35,358 pupils, only 30,158 (15,083 girls and 15,075 boys) did participate in the survey[35].

"NECTA used BEMIS - Basic Education Management Information System, an annual census of all the schools conducted by PO-RALG with the same published online. BEMIS gives you all the statistics of the children, how many children, teachers, books, desks, latrines /toilets…and it is done every

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[35] Out of the 16,340 public schools in Tanzania, 1,247 (7.89%) schools with Standard II enrolments of fewer than 25 pupils and 3,280 (20.76%) schools with Standard II enrolments of more than 150 pupils were excluded.

year…" **Expert and implementer of LAs**

Regarding the dissemination of the results, the government adopted the EPforR dissemination strategy that involved the sharing of the report supported with guidelines to policymakers, respective ministries (MoEST and PO-RALG), selected schools and the analysts. The report is also placed on the NECTA's website stipulating how the government can make improvements on the areas not performing well, thus informing policy decisions. The dissemination has also been held at different policymaking levels to share the results region wise to prompt relevant actors, including schools, to reflect on how best they can improve.

> *"We had a dissemination roadmap showing how to disseminate the findings across the whole country. In those meetings we had all the policymakers from local government authorities, the Regional Administrative Officers, the Regional Education Officers, and the District Education Officers, with the results given per region. And some of them [The leaders] were so shocked by how their regions performed poorly..., so dissemination process helped [the government actors] in planning...,"* **Expert and implementer of LAs**

> *"The results have been used to develop the Education Sector Development Plan (ESDP)…"* **Expert and implementer of LAs**

LAs results are also used to allocate regions where more project interventions are needed particularly areas demanding improved learning outcomes for students

> *"LA results are used to determine areas needing a lot of attention…, for example, Shule Bora[36] is implemented in nine regions, now how do you determine which regions? Why do you take [Region X] and not [Region Y] for example…? You need certain indicators…, The results of the Standard II National LA in collaboration with the EPfoR have been used in allocating the nine regions where Shule Bora is currently implemented..., the interventions aims to ensure that the nine regions, which are underprivileged, as they performed very poorly in 3Rs improve as quickly as possible to catch up with the national average trend…and as I have said children who perform poorly in 3Rs are also likely to fail in PSLE...We want to see at least 10% improvement in learning outcomes in those areas in the next five years..."* **Expert and implementer of LAs**

The National Standard II LAs results have also been used to provide feedback to improve learners' performance during the actual practice. The results also form a component in the school continuous assessment, which is integrated in the formal assessment framework along the competency based curriculum.

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[36] Shule Bora programme (a five-year project starting 2021) aims to support the Government of Tanzania to test, adapt and deliver interventions at scale by improving quality, inclusiveness, and safety of learning for all 11.5 million girls and boys in government pre-primary and primary schools in Tanzania. Shule Bora has four Outcome areas (Learning, Disability, Girls education, and School safety).
(https://udahiliportal.com/shule-bora-quality-school-programme-head-of-technical-job-vacancy-at-chemonics/.

"The competency based curriculum place emphasis on the assessment of knowledge and skills…, while knowledge reflects growth in the cognitive domain…, practical skills as reflected through action demonstrate development/manifestation of psychomotor domain…, there has to be a balance between cognitive and psychomotor aspects…" **National examination agency official**

4.2.2 UWEZO Citizen-led LA

Since 2010, UWEZO started conducting citizen-led LA to establish evidence on the learning levels using Standard II curriculum. The UWEZO tool was benchmarked to assess standard two-level mastery of literacy and numeracy competencies among children aged six to 16, mostly at the primary level.

"The tool was designed by experts from NECTA, the University of Dar-es-Salaam Mathematics literacy experts, the Tanzania Institute of Education [TIE], and primary schools teachers…the tool is benchmarked at Standard Two level…with the understanding…Standard Three, Four and higher level children must have mastered the required Standard Two basics...UWEZO assessment has been conducted since 2010 to 2017 excluding 2016…in 2018, we couldn't get enough support alongside the permission formalities with this delaying and later halting the process…, I think if we get funds, we can run the assessment …," **Learning Assessment producer.**

To get a sample representation at the national level, Uwezo worked with the National Bureau of Statistics agency.

"We work with National Bureau of Statistics [NBS] and their main role is to provide sampling. So, we have different sampling categories, national representative sample, regional representative and district representative sample. Most of our UWEZO assessments are based on national representative sample…so depending on the funding…, we go to NBS and talk to them that we want to conduct UWEZO assessment…we want to come out with findings which can have a national representation. So, they run their calculations and they tell us…if you go to 36 districts or if you go to 50 districts which are these ones…they consider nearly every part of Tanzania, so if you send the findings, they become of a national representative...so, we abide to their guidance" **Learning Assessment producer.**

On the dissemination of the LA results, they are distributed to a wider list of education stakeholders including national policy actors, middle level policymakers, politicians and practitioners. For effective dissemination, the LA actor, has to identify key people to share with them the LA report for inputs.

"Before going to the large-scale dissemination, or to the public…you can have few actors, who are key to understand the data, to understand the recommendation from the findings you have provided…you can involve policymakers at different levels…senior policymakers, political policymakers, technical expertise policymakers...So you can see there are like three groups...to engage them prior to dissemination…or report launch." **Learning**

Assessment producer.

Furthermore, before the dissemination event, the report must be submitted to the respective ministry secretariat for final review to see if it meets the dissemination purpose.

"Yet again before launching the report, we usually submit it to the responsible personnel at the ministry level...who engages the secretariat at the ministry...I remember we submitted the last report in 2019...before we launched it, saying this is our report and it is now ready for launching...there was a committee that went through the report...and after which they told us the report was okay and that we could launch it..." **Learning Assessment producer.**

With the report in place having passed the key reviewers' perspectives, report launching events are organised as part of disseminating the findings.

"We invited the respective two education ministries, different CSOs/NGOs, local and international, I mean we invited all categories of stakeholders....including teachers, parents...participants were invited for comments...we further give them a month to submit additional comments...to enable us improve the report...," **Learning Assessment producer.**

Accordingly, once the reports are launched at the national level, they are further disseminated at the sub-national level to the respective districts.

"So after launching the report at national level, we usually launch it at the district level...We go back to every district, we organize an event, we invite all the educational officials and other officials at district level as well as parents, NGOs, quality assurers... we then share with them the findings related to their district so that they too can understand the learning level of children in their area...the national report is a bit comprehensive but when you go to the district the report is very simple and has very few variables to enable understanding" **Learning Assessment producer.**

With the dissemination at the district level, the audience (education leaders and the local community) come up with an action plan and resolutions to address the gaps raised from the report. The action plan forms a basis for monitoring progress among the LA actors and practitioners with the monitoring visits happening in a year or above. Most often, improvements are observed since the audience make some commitments to work on the agreed resolutions.

"Usually we go back after the report launch to make some follow up...during the launching event, we ask them [at the sub-national level] to give some commitment that if we come back after few years or one year...we can find some gaps already solved...I remember, we went to a certain school one day to launch a report in year XYZ...one of the issues we were discussing during our launch...was school meals...after one year we went back...feeding programme has been introduced and the performance gap reduced...so we believe that our report brought positive changes in that community." **Learning Assessment producer.**

There is also a need to keep a database of the LA actors, stakeholders and practitioners from the national to the sub-national level to support the monitoring process and provide an up-to-date information at a low cost.

"So we have a number of people from the districts, villages ...we refer to as village coordinators...we have more than 300 partner organisations ...we also have a network of volunteers..., more than 41,000 citizens across Tanzania...So, when we want to make a follow-up on a certain issue in district XYZ for example...we just call these volunteers, we get an instant feedback..., [Example], one school had one or two teachers and then the government brought five teachers....So now we have six teachers in our village and then we mark it as one of the successes..." **Learning Assessment producer.**

It is also important to design an advocacy strategy to guide the dissemination of the LA results including the related reports. An advocacy strategy stipulates the advocacy themes including the mechanisms and the key activities to be undertaken towards the realisation of the strategy goal.

"At the national level after the launch we continued engaging through various platforms, media, various educational meetings and conferences...if we are invited at the ministry to attend a certain meeting, then we use it as an opportunity...we also include some of our data...We are using televisions, radios... newspapers, blogs..., we write some articles in the newspapers, sometimes we conduct some interviews with journalists, sometimes we use free TV spots...we also engage through our social media accounts such as twitter...thus, we do not end up with the launching, rather we continue and keep on engaging the public...," **Learning Assessment producer.**

It was, however, noted that there is a need to launch the reports to specific categories of audiences to gather their views on how to address the gaps as reflected in the LA report. This is an area UWEZO would want to explore, though currently not doing so.

"We have been doing launching events to a broader group of many stakeholders..., [in this regard] teachers are there, students are there...other invitees are there...but I think if we can do it separately where we are going to launch the report to teachers alone without their bosses...I think they can talk more...they can also give some clues why the LA findings are looking that way..., that is the gap on our part..., we need to act upon..." **Learning Assessment producer.**

Regarding the utilisation of the UWEZO LA, the findings were widely disseminated to different stakeholders for the purpose of bringing a systemic change. For example, in Tanzania there was a change in curriculum of Grades One and Two with the same arising due to the UWEZO citizen-led LA findings.

"I remember in 2015, the government started focusing on the 3Rs, if you remember... so we are sure that UWEZO contributed to this because since 2010 we have been telling them that the children are not learning and mastering

these basic skills; literacy and numeracy..." **Learning Assessment producer.**

Dissemination reports can also be uploaded in the institutions' websites for public use and further referencing. The open access of the reports also enables for tracking the usage.

> *"Our data are open to the public…it is a global asset and accessible through different platforms…I remember it was last year one [2021] organisation sent us an email that your data are the ones leading in terms of being accessed globally… the audience includes researchers, academicians, organizations, governments…,"* **Learning Assessment producer.**

LA results are also used to design interventions to address the gap as established from the findings. For example, UWEZO has been implementing the Teaching at Right Level (TaRL) approach. TaRL as an innovation came up as an intervention to address the gap in 3Rs as established from the UWEZO LA. Annex 1 Case 1 details more about the TaRL approach. Case 2 (Annex 1) further narrates about the Room to Read approach regarding the utilisation of LA results.

Following significant improvements on the 3Rs of the learners that were taught under the TaRL intervention, TaRL is now integrated into the Continuous Professional Development Framework.

> *"First, we assess students using UWEZO tool to learn their mastery level and gaps in the 3Rs...thereafter, the students are grouped based on their training needs and teachers are equipped with different techniques to help those students…after a 30-day comprehensive training, all students are found to master the skills they lacked before the assessment…TaRL is now included in the Teachers Continuous Professional Development Framework, and it will be used from next year [2023]. Other adoptions into the CPD include digital literacy in teaching…also life skills will be taught as an independent component…"* **Learning Assessment producer**.

4.3 Barriers and challenges to utilisation of the past and present LA findings

4.3.1 Global overview

Findings show that many countries have learning assessment data and findings at their disposal. However, the data are not put into use by policymakers due to various barriers and challenges. Raudonyte (2019) grouped the barriers in four groups; reliability and relevance of the data provided; coordination and dissemination channels; financial and technical capacities; and political and institutional factors, each is further discussed.

Reliability and relevance of the information provided

Policymakers can ignore the data from learning assessments if they suffer several technical limitations in instrumentation, sampling procedures and analysis (Kellaghan, Greaney, Scott Murray, 2009). Another issue is when there is no comparability of assessment cycles over time (Tobin et al., 2015). Ellks (2016) notes

that results from the National Assessment of Progress in Education (NAPE) in Uganda were rejected because they lacked comparability from one evaluation cycle to another. They were further criticised for repeating well-known points and proposing solutions that were too expensive to implement (Elks, 2016). It is, therefore, clear that policymakers will implement learning assessment data that are relevant to their contexts. This is why Elks (2016) goes on noting that when NAPE later provided relevant information and implementable recommendations to the Ministry of Education regarding the importance of teacher subject knowledge on student outcomes, it encouraged the raising of subject knowledge requirements for entry into a teacher training college (Elks, 2016). Further to the case of relevance, Raudonyte (2019) notes that most of the international assessments do not adequately reflect policy concerns of individual countries, hence making it hard for those countries whose policies are not addressed to accept the relevance.

Financial and technical capacities

Countries that are financially handicapped can neither conduct the assessment process nor implement the policies recommended by the analysis of results thereof (Raudonyte, 2019). Additionally, countries that do not have sufficient financial resources cannot continue assessing programmes when funding from the external donors' ceases (Best et al., 2013; UNESCO Bangkok, 2017). There is also a problem of low technical capacities, discussed in a two-way traffic. On the one hand, is when the assessment team lack the requisite capacity to undertake in-depth analysis and interpretation of assessment data, hence end up generating data which remain superficial and highly uninformative for policymakers (UNESCO Bangkok, 2017). On the other hand, in some contexts the learning assessment data are not used because decision-makers lack knowledge and skills to interpret and use the available information (Kellaghan, Greaney, and Murray, 2009; Paviot and Saito, 2015).

Coordination and dissemination channels

Fragile coordination between numerous government departments and the assessment group does slow down the effective use of assessment results in policymaking (Best et al, 2013). Where there has been little involvement of the policymakers and other key stakeholders in the learning assessment, there has been witnessed presence of little understanding, little ownership of the results, neglect and a lack of urgency in up-taking the recommended policy change by the less involved part (Mejía and Pouezevara, 2011; Elks, 2016). On this note, Elks (2016) explains that the successful use of data from EGRA in the monitoring and evaluation of Tusome Project has been due to proper involvement of the key stakeholders.

The anomalies in the dissemination channels can also limit the use of data obtained from the learning assessment. The learning assessment data are neglected when reports published are written in a language that only the high-level technicians can understand; also when such reports lack guidelines for interpreting the results and when they seem to have never been fully tested for relevance prior to their dissemination (Crespo et al., 2000). Also, dissemination problems are likely to occur when the data are not timely communicated. Assessment results are meaningful when they are communicated immediately after data collection (Tobin et al., 2015). When data are not communicated on time, the policymakers feel they are receiving outdated information, hence easily ignore it (Elks, 2016).

Political and institutional factors
When assessment results are sensitive or even embarrassing for policymakers they are likely to be rejected. One condition is when, for instance, the results point to educational inequalities associated with socio-economic, ethnic, racial, or religious groups, decision-makers might be discouraged from publishing them openly (Kellaghan, Greaney, and Murray, 2009). UNESCO (2016), for example, published Tanzania data regarding the number of the out of school children to be 3.1 million, which was in contrary to the policymakers' understanding. The data was first not approved, but later and after some audit check, the government signed the document as an official report. Accordingly, when there are highly disappointing results, some countries may stop even participating in assessment (Raudonyte, 2019). South Africa participated in Trends in International Mathematics and Science Study (TIMSS) 1995, 1999, and 2003, but not in TIMSS 2007 due to "outrage in different circles starting with the Department of Education, which had difficulty accepting the very low performance of South Africa's learners" (Lockheed, 2013 p. quoting Howie, 2011 p. 301). Another political barrier in using the assessment data is the instability. For instance, the management and usage of the Programme for the Analysis of Education Systems (PASEC) results conducted in Ivory Coast were considered less effective than in other countries due to political instability that was prevailing in the country (Bernard and Michaelowa, 2006). Likewise, results from the same country conducted later in 2014 were accepted with no doubt as the country had returned to its stability.

Anderson (2019, p. 6) further mentions four main challenges to building strong learning assessment system[37]; (1) quality of the assessment tools and the lack of technical expertise for assessment design, administration and analysis; (2) alignment across the various types of assessments used, and the positioning within national education systems; (3) assessments often not encompassing the most marginalised children, including those with disabilities and not in school; and (4) the lack of use of learning test results, which is influenced by how assessments are designed and disseminated, and the available expertise and resources for making change. Other challenges include, a gap in guidance for training teachers to conduct and use classroom based assessments, and in examination reforms, a lack of in-depth analyses of the data, the quality of the assessment programme, a lack of political will and funding to scale up what has been shown to work, and a lack of globally comparable data on learning outcomes. Indeed, there is a need for more countries to participate in cross-national assessments since the same is lacking in marginalised countries and for the most marginalised learners within countries (Anderson, 2015, Mulongo and Amod, 2017).

4.3.2 Challenges of administration and utilisation of LAs considering the Tanzanian context
4.3.2.1 Challenges related to the conceptualisation of LA
At the national level, the major challenge observed by all the participants' categories from the grassroots' (classroom) to the policy level is that of treating LAs

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[37] Policies, institutions, assessment tools and practices that contribute to gathering and using information on how students are learning in the education system (Clarke, 2012).

as national examinations.

> "One of the capacity gap that I have always communicated is the struggle between the national LA actors towards understanding the difference between a learning assessment and an examination. Actually they handle a learning assessment like an examination…the LAs instruments are escorted with the national security officers…that there is secrecy…Even when it comes to the releasing of results, they should pass to the minister…well there is objectivity to this.., but learning assessment doesn't have to be like this…it's a research…I keep telling the actors that learning assessment is a study…so the actors are worried…, if the media get the results, they can even add to it things which are not reflected…they begin exaggerating and I think that's why they [actors] view LA as sensitive…" **Expert and implementer of LAs**

There is also a concern regarding the number of qualified researchers to design and implement a robust LA tool. There is also time and cost implications for administering a LA, reporting and dissemination.

"LA is the most expensive part of any nation..., because you examine one learner after the other. You assign him or her the section to read…For example, the NECTA interviewed 28,000 children in 2019 for this national LA…, every learner reads a section for one minute, and there are other questions…, so for every learner for example, you can spend a minimum of half an hour...," **Expert and implementer of LAs**

Besides the higher budget meant to conduct LAs, most LAs are donor funded and are run as programmes within project initiatives. In this regard, the sustainability of the assessments become of concern after the end of the project. There has also been a challenge of the key national stakeholders fearing the debate emanating from the LA results. This has made other LAs such as UWEZO to receive wider national coverage compared to the national LA.

4.3.2.2 Challenges related to the utilisation of LA

Overall, the major challenge on the utilisation of the LA results is that the policymakers are not fully utilising the LA results as it would have been intended to inform classroom practices and policy reforms. While the practitioners and LA actors keep sharing reports to policymakers in various gatherings such as workshops and trainings, they are not sure if the reports inform policy decisions.

> *"Whenever we notice a gap, we conduct trainings, we usually share our reports with policymakers proposing recommendations on what needs to be done in our education system to achieve quality education…, for example, if there is a hard topic or shortage of a certain knowledge…, or teachers are not given enough training on how to assess students or using competence based curriculum…," (National Curriculum Agency 1_22); "…but, I doubt if they work on the recommendations…, they can decide to do or not to do…,"* **NGOs representative**

A focus group discussion with teachers also brought similar concern.

"Through trainings, we get chances to meet with the ministry officials, directors and…, we discuss different changes to improve learning, but we hardly notice any change(s) in our system…, it might be possible that the challenges are said at the wrong time or in a wrong platform…" **Teacher**

From the policymaking side, some of these findings are integrated, but more recent data is collected and validated to inform the policymaking process at the actual time. Policymakers also conduct documentary review based on reports generated and received from practitioners across different units/directorates. Concerning the data and findings from the LA results, policymakers regard them if the sample was representative and has followed all the data collection protocols.

"You find some LA actors collecting data from one region on a certain skill(s)…, you find the area based on their economic activities, for example, nomadic lifestyle…, most of the targeted students cannot perform well on the skill assessed…and the actors want us to own the results…this cannot happen…because the data are not representative of the population…having realistic and authentic sampling is very instrument for generalisation of the LA results…engaging government organs such as Tanzania Commission for Science and Technology (COSTECH) for research clearance adds to the results' ownership…," **Education Policymaker**

Some NGOs also have the assumption that their challenges are so intense and are no longer sure if the government can assist them.

"Even if we tell them [the government] all of our challenges, I do not think they will pay so much attention… just imagine, in a class of 50 students, one teacher deals with deaf students, blind students, students with other disabilities and those who do not have any disability. How is this possible? Moreover, teachers are not capacitated on how to use right techniques for these students…but also the infrastructure in schools do not meet the needs of disabled students. Currently, there is a system that if you fail, Standard IV exam, you remain in the same class. The surprising part, when a deaf student stays in that level for three years, they just make them pass, so they can proceed to other levels, then in the end they fail Standard VII exams…, to address these challenges, policymakers need to work with us and accept our findings…" **NGOs representative**

Other challenges include limited resources in terms of expertise, the technical know-how, financial cost and time constraints to administer LAs. Further recommendations are provided.

4.4 Suggestions and recommendations for building and utilisation of learning assessment systems

4.4.1 Global best practices/perspectives

To counter the barriers for which countries are likely to abandon using the LSLAs data, Raudonyte (2019) suggests addressing in advance the group of barriers as earlier discussed. It follows that the question of reliability in the findings can be addressed by ensuring there are no technical flaws in the instrumentation. To this effect, there should be appropriate sampling techniques, appropriate sampling, and comprehensive analysis of the findings just to mention a few. Achieving these goes hand in hand with having skilled personnel in the team that is undertaking the assessment task. With regard to the relevance of the data, it is difficult to have the findings upon which each country gets its educational policy reflected, unless such assessment covers the entire world-which is almost impossible. However, regional assessments can be tailored in a way that reflects the specific regional countries' educational policies and practices so as to increase the relevance of such findings within that particular region. It is, however, important to note that the factors associated with dissemination channels are primarily within the control of the researchers, unlike other challenges such as financial capacities, political and institutional factors.

Additionally, Makuwa & Maarse (2013, p. 355) suggest that the management of the large scale learning assessment and the utilisation of the results are enhanced when: (a) research results are widely disseminated and openly discussed with all stakeholders; (b) the analysis of the results should be innovative and points to specific gaps in teaching and learning; (c) follow-up small-scale diagnostic assessments are conducted to assist teachers and learners in pinpointing areas needing improvement and identifying improvements or the lack thereof; and (d) targeted holistic interventions are initiated at the system level with clear support services that involve administrators, school principals, teachers, parents, local communities and all other stakeholders.

There is also a need to establish strong assessment institutions through capacity building including putting in place national and regional assessment frameworks. According to Mulongo and Amod (2017), evidence of strong government structures[38], technology transfer[39] and improved teacher competencies are considered as key indicators of enhanced capacity towards building and utilisation of LAs. Accordingly, the transmission of the know-how should suit and be sensitive to local conditions in terms of the education systems/language/mode of instruction to enable for effective absorption and discussion both within and across countries. The instructors (teacher training institutions/teachers) should also be well-equipped with the capacity to undertake the curriculum reforms to enable for the transmission to the learners.

There is also a need to build the capacity of teachers, education leaders and policymakers on the use of the classroom-based learning assessments[40] as well as on the utilisation of the national learning assessments for national, regional and

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[38]distinct but interdependent functional roles of exerting leadership and power along regulating public affairs, decision-making for the well-being of the society and the implementation and coordination of policy formation processes Blonde (1982).

[39]The transmission of the technical know-how to participating actors at the national level to influence changes in curriculum for them to design and implement their own assessments.

[40] Which are highly dependent on the curriculum and instructional needs of national education systems

international reporting. A review on how learning assessment data (classroom-based, examinations, and large-scale) influence policy in low- and middle-income countries will inform further the utilisation of the related findings.

4.4.2 The Tanzanian context

First, suggestions are provided related to the administration of LAs. In this regard, there is a need to digitise LAs to eliminate the time for coding before the data analysis process.

> *"I am happy that NECTA has adopted some technological methods of assessing children. They are using iPods…but I think we need to reach a stage where we can digitize our assessments…we identify a sample of learners, we tell the head of school, these learners should have something like a phone or a tablet to carry out the assessment…and then someone instructs them to read this and that… after some minutes the test is over…it even minimises the cost, we can even do it for the whole country…"* **Expert and implementer of LAs**

Secondly, suggestions are provided towards improved the utilisation of the LAs. One key point towards the effective use of the LAs is the analysis part and the preparation of the related report targeting the key actors, especially at the ministry level.

> *"For the national Standard II LA, we did a lot of analysis, we analysed the words cluster, for example children struggle to read words with syllable consonants like "kwa", children also struggle to read the consonant "r", "ng"…we even dig deep to establish regions with children experiencing more challenges in the 3Rs…this enable the quality assurers to establish further if it has to do with the children themselves, or teachers, or the teaching and learning environment…including distance from school…so all these need to be well analysed as they provide valuable information to the policymakers…."* **National Assessment implementor**

Thirdly, there is a need to disseminate the findings of the LAs to a wider audience to enable for a public debate.

> *"I would advise for a national dissemination forum where media and other key actors and stakeholders are invited when the results of learning assessment are released…to generate a big national debate…up to the Parliament…so it shouldn't only be a report that goes to the ministry. Let's also have an annual stakeholders meeting…the reports should not be shared physically…for example [Institution XYZ] every year publish a book of item difficulty analysis, the book is sent to heads of schools…some of whom do not even read it… [In this regard], the feedback process is not complete…So you have conducted assessment…yes, then invite key stakeholders to hear and discuss the report... therefore, the first thing is… I would advise, there should be national dissemination..."* **Expert and implementer of LAs**
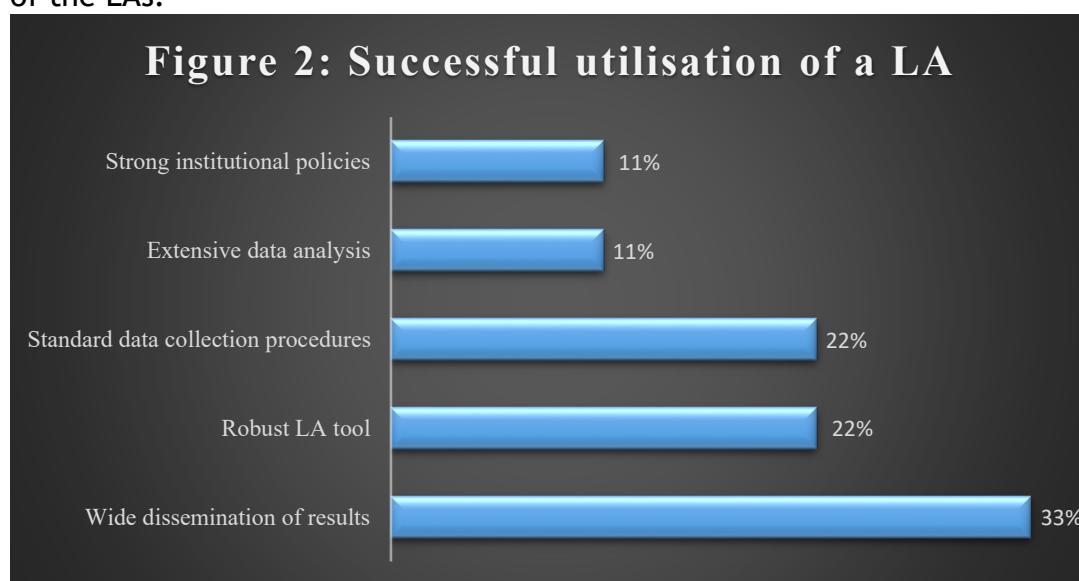
Fourthly, suggestions are given regarding monitoring the implementation of the LA results by different actors.

"There should be monitoring, to make sure that these LA results are used as intended...the Government should allow other NGOs to do this...because there are many schools and Government alone cannot do it frequently...but also teachers are used to the inspections done by the quality assurers, and so they normally prepare themselves very well, it is thus very hard for them [quality assurers] to notice challenges...so by allowing other actors like NGOs to do the monitoring visits, better reports on how assessment is done may be generated..., the ministry should be ready to receive the reports and work on them...in addition, the competence based curriculum should be enforced and finally, more attention should be given to life skills as they are not explicitly assessed..." **Learning Assessment producer**

Finally, there is also a need for a nation like Tanzania to participate in regional and international LAs.

"My advice, there was a time Tanzania participated in SAQMEC..., the practice that was not continuous..., let's open doors that our children are assessed with others in Africa so that we know where we are..., we can merge and/or integrate the NECTA or current national assessment with regional assessments...say for example, we have examination council of East Africa...., then extend to West and Central Africa, we should also bring the SAQMECs..., and the whole Africa, just like with PISA in the regions it is conducted. That will take us very far..." **Expert and implementer of LAs**

Figure 2 summarises in percentage the factors that are key to effective utilisation of the LA considering the Tanzanian context. While all the factors matter, the wider dissemination of the results might contribute significantly to the utilisation of results only and only if the tool was robust and the data were collected and analysed extensively. Having an institutional policy particularly advocating for dissemination and monitoring of the results will bring more positive outcomes towards utilisation of the LAs.

Figure 2: Successful utilisation of a LA

Strong institutional policies — 11%
Extensive data analysis — 11%
Standard data collection procedures — 22%
Robust LA tool — 22%
Wide dissemination of results — 33%

4.5 Conceptualisation and Development of Life Skills in the Tanzania Education System

The conceptualisation of life skills is diverse. On the one hand, organisations that work with schools to develop life skills view collaboration, problem solving, critical thinking, communication skills, sexual education and hygiene as examples of life skills. On the other hand, other participants relate life skills with extra-curriculum activities such as participation in sports, competitions, school cleaning, sports and the like. The later conceptualisation was common in schools and in teacher education colleges. Other study participants view life skills as the skills acquired by studying vocational courses like cookery and needlework as they enable for one to learn specific trade or occupational skills.

Regarding the integration of life skills in the national curriculum, since 2005, the Tanzania national curriculum introduced competence-based curriculum to enable for assessment of life skills as an embedment in other subjects.

> *"At first, life skills were not explicitly integrated into the curriculum, for instance that one of 1995, then that competence-based curriculum of 2005 or even later in 2015…at the secondary level, there is a topic of civic morals for form 1, 2 and 3…, in Biology too there are aspects of moral life introduced as a cross cuttings issue…, Life skills have also been introduced into counselling and guidance in the education system to instil self-esteem, patriotism, etc. Furthermore, recent books from the national curriculum development agency have some exercises incorporating problem solving skills…,"* **National Education Agency Official**

At the primary level, there is a subject "Stadi za Kazi[41]" that address life skills as a stand along subject.

> *"In standard seven…, "Stadi za Kazi" aligns to life skills…, but we don't measure the practical aspect of life skills as in the current standard II national LA…, which integrates practical aspects in measuring life skills…,"* **Learning Assessment producer**

Life skills is also integrated in the subject "General Studies" at the advanced level as further narrated during a focus group discussion with teachers;

> *"The subject General Studies has a topic called life skills, at least this can help students learn communication skills that can be applied in other subjects…,"* **Teacher**

Regarding the development of life skills as done by NGOs, various programmes have been designed for students to enable the development of diverse kinds of skills.

> *"We provide self-awareness training on drugs and sexually transmitted diseases…., Other trainings include…self-awareness and adaptation to real-life situations, community engagement and gender culture, communication and personal relationships with the community, proper decision-making and*

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[41] Literally translated as work skills

entrepreneurship…" **CSO/NGO representative**

Among the providers of life skills in the Tanzania context include GLAMI, FEMINA HIP and CAMFED to mention a few. GLAMI work with selected secondary schools to empower marginalised girls through special education programmes conducted after school hours. The programme empowers girls with skills for life, for transition across education levels and for staying in schools thus enabling them to realise their goals. FEMINA HIP works with youth in secondary schools on sexual reproductive health, entrepreneurship and on how to become responsible citizens. Their approach to skills development is edutainment and thus they use school clubs, Female Male (FEMA) magazine, TV and radio broadcasting to advocate for responsible youth, who can make informed decisions. Other skills developed by FEMINA include self-awareness, goal setting, caring and collaboration.

CAMFED[42] also works with marginalised girls by providing financial support and skills development programmes thus reducing social barrier among them. Almost 30% of the recruited girls under their programme do not have parents. CAMFED thus works with social workers to identify the children to support and has managed to build alumni where beneficiaries continue to connect even after graduating at different levels. CAMFED developed a skills development book "Dunia Yangu"[43] with the book used as a guide for skills development programmes.

Regarding the development of life skills among teachers, Continuous Professional Development (CPD) programmes are seen as a mechanism to enhance and assess their skills using different tools along their teaching roles. In practice, life skills content mastery including the related assessments do not feature in the teacher education curriculum.

"While we attend different CPD trainings…, such as STEM, Re-tooling and the trainings conducted under the Zanzibar Improving Student Prospects (ZISP) project…, most of them are not about life skills…," **Teacher**

"A training close to life skills was on Emotional-Skills which was done at XYZ[44] University.., where we were trained as Training of Trainers…, and later trained teachers and assess their skills using a questionnaire, interviews and observation checklist…, [Accordingly], the teachers trained had no emotional skills and most of them were just teaching by experience…, because these skills and [the related] assessments are not part of the teacher education curriculum…." **Higher Education Institution Researcher**

Life skills are also developed through personal initiatives particularly non-formal and informal curriculum and other skills development mechanisms. Thus, individuals with limited exposure unless exposed to the right mechanisms [in this regard formal education and/or CPD] might not acquire life skills to the fullest.

"I have not been trained at all regarding life skills, rather due my own initiatives I have come to learn about all these issues of life skills and giving

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[42] Its vision is to eradicate poverty in Africa through the education of girls and the empowerment of young women
[43] My world
[44] The University of Dodoma

consultancy in this area based on my area of specialisation i.e. educational psychology. Also, I am part of curriculum development team working with the national curriculum development agency, there we also deal with these issues that is why I have gained knowledge besides not having attended any training on life skills. I think no training has been given to stakeholders about life skills and how to assess them…, this is why many of them are still facing a problem on how to measure them as part of curriculum assessment…I also happen to form part of an initiative working on life skills of empowering self-esteem and confidence among girls from difficult and challenging environments. The project has not yet measured these skills but I think soon it will do so. I can say…no organised trainings have been done to different stakeholders on how to deal with life skills in our curricula...” **Higher Education Institution Researcher**

4.5.1 Assessment of Life skills

Regarding the assessment of life skills in a classroom setting, variations exist among the study participants. On the one hand, life skills are assessed and/or recognised considering the institutional context and on the other hand, life skills are not assessed at all, with this typical to NGOs that offer skills development programmes in the education system. On the assessment hand, the practice is that life skills are assessed along other subjects, with no specific tool aimed for the purpose.

“Although the curriculum has not yet guided on how to assess life skills…the nature of questions in national examination address life skills aspects...with the questions enabling learners to practice problem solving, communication, collaboration, etc. Therefore, the current curriculum to a large extent has incorporated life skills issues compared to the former curricula…,” **Higher Education Institution Researcher**

In teacher education colleges, life skills aspects like collaboration and teamwork are assessed during teaching practice in a confidential form filled by the heads of the school. Life skills are also recognised through awards during graduations and special occasions.

On the other hand, most of the school interventions aimed to develop life skills as done by NGOs are not assessed. One of the reasons is that they do not have a tool for the purpose. There is also an understanding that findings from the life skills assessment do not have any contribution to the students' formative or summative assessments even though, they inform classroom practices. As narrated by one project that works with schools to develop core skills to teachers.

“There is no specific assessment tool designed to assess skills, we just observe how teachers train students…” **CSO/NGO representative**

“There are no direct techniques to assess life skills, but it is done via some of the subjects and activities at school…, For example, primary school students may be given a task to design something and given marks for it…, secondary students are mostly given projects within their subjects…” **Curriculum Developer**

Due to the lack of an assessment tool, an NGO in Zanzibar decided to work with the curriculum development unit and proposed skills assessment techniques for different topics currently under piloting.

> *"We used the current curriculum, spotted gaps and challenges and re-design it and propose learning and assessment techniques for different topics. We then shared with the department responsible for curriculum, they gave out their opinion(s) and allowed us to pilot it in one of the primary school in Zanzibar. We are looking forward to meeting them again for further discussion. Apart from curriculum, we also reviewed their books and develop ours which are more enriching to learner's life skills… [in this regard], we worked with the department of curriculum to showcase our edited curriculum and books that assess better life skills"* **CSO/NGO representative**

Given the lack of a standardised tool to assess life skills, some NGOs adopt skills from the funding agencies and others design their own tools such as surveys or interviews. One NGO admitted using interviews since their beneficiaries are deaf. Regarding the adoption of tools, one NGO adopted a tool from the UK, but the tool did not fit the Tanzanian context.

> *"In one of our project, we adopted a life skill tool and when using it, we realised that it doesn't fit our context. Currently, we are designing our own tool in collaboration with RELI but redefining the existing one in-order to fit the context of Tanzania…,"* **CSO/NGO representative**

Fortunately, the national Standard II LA as administered by NECTA assesses life skills. In this regard, six types of questions have been designed to assess students' mastery of life skills with the mastery of the competence measured based on learner's speed and accuracy.

> *"We use guiding questions, example a child should demonstrate washing a cloth accurately within two minutes, we also have yes and no questions that measure child's awareness…, we also have multiple choice questions as we make choices in our lives everyday…, other categories include matching items, deductive questions that seek to assess ones' inquiry ability and finally…, we also ask questions that enable children to fill in gaps…."* **National Curriculum Agency official and LA implementor**

Given the lack of contextualised tool for assessing life skills in the Tanzanian context, Milele Zanzibar Foundation (MZF) designed a contextualised tool for assessing life skills. The ALiVE tool seems to be the only local initiative aimed for assessing 21st Century skills in the project countries.

> *"We developed a contextualised tool for measuring life skills for youth aged 13-17 who are still in school and those not in schools…, we assess three skills; Self-awareness, problem solving, collaboration and one value, respect…, the tool has been used to assess over 5,000 adolescents in Zanzibar and the analysis is still ongoing…, MZF works with SUZA, FAWE, SAZANI, AGA KHAN and Government agencies particularly TIE, NECTA, ZIE, University of Dar es Salaam, MoEST, PO-RALG and a member of parliament…, the final goal is to*

create awareness to the community and policymakers and [thus] influence policy and make sure life skills is added as a subject…, The government accepted the idea and became part of the process…, throughout the process, we learnt that life skills cannot be measured within a subject as in the end, students are given exams for a particular subject without life skills being assessed explicitly…,"
Learning Assessment producer

4.5.2 Challenges towards assessment of life skills
4.5.2.1 Global perspectives
The major challenge at the global level towards the assessment of life skills is that, most of the existing LA tools assess literacy and numeracy skills besides the broader curriculum goals. This calls for the need to review the scope of the existing tools in terms of skills assessed to establish what works and recommend improvements. According to Anderson (2019) and Care and Kim (2018), 21st Century skills embracing (critical thinking, collaboration, problem solving and creativity), social and emotional learning and global citizenship are under-assessed using the existing learning evaluations. Assessment of 21st century skills, however, demonstrates low predictive ability of learners' outcomes, demanding for a review of good practices in competence-based assessments, which is better suited to assess the same. Guidelines for harmonising donor priorities for assessment should also be assessed to enable for the assessment of the marginalised and other skills that are relevant but not assessed in the existing learning assessments.

4.5.2.2 The Tanzanian context
The major challenge in line with the assessment of life skills include limited knowledge among teachers and other stakeholders regarding the broader conceptualisation of life skills, the related teaching and assessment, including assessment of values. The challenge emanates from the fact that the teacher education curriculum does not integrate explicitly life skills. There also exist limited CPD targeting teachers to enhance life skills aspects among them.

"The curriculum does not consider very much, the assessment of life skills, most of the assessments are based on the subject…, unless a teacher has an extra training on how to assess life skills can use that knowledge to asses them, otherwise they are not assessed, and should the skills be assessed teachers use the tools as stipulated in the respective curriculum [such as] presentations, projects…, some of which do not measure articulation of skills considering the accuracy and speed…," **Teacher**

"Besides the improvements on assessing life skills competencies [integrated in Biology and Civics subjects] along the NECTA assessment framework, where questions have been designed to measure skills like problem solving [etc], there is still a challenge of how to measure and assess values even among actors involved in skills development…," **Education Researcher/expert**

Although there is a provision to assess life skills along the curriculum, life skills given their nature are complex to assess objectively compared to other subjects, thus

teachers do not assess them.

"The curriculum gives room for both simple and complex assessment…, complex assessment measure students' soft skills.., however, by experience most teachers only use simple assessment…, and thus soft skills are not assessed as required…," **National Curriculum Agency Officer.**

The understanding of life skills is also contextual and keeps changing depending on the learners' stage of development raising the questions of reliability and validity of the findings.

"Measuring life skills is not done directly like just giving a child an arithmetic problem like one plus one which the answer is two…, thus assessing life skills is very tricky because the issues of reliability and validity are problematic…, and so many people do not opt assessing these life skills now that the constructs are not easily measured…" **Education Researcher/expert**

Indeed, with the shift of the national curriculum from content to competence-based curriculum (CBC), which is best suited to assess skills, there has been limited continuous professional development among teachers to enable for the mastery and application of this curriculum.

"The curriculum developed is competency-based but teachers are still treating it as content-based. This is because most teachers did not get a training on what competency-based is and how it should be taught and assessed…for example, 62% of teachers in [XYZ] institution do not provide required assessments to students…, [indeed], most teachers are skipping some topics claiming that they do not know how to teach them…, XYZ prepares exams which are competency-based while teachers assess students with content based exams…, with this leading to students' poor performance in national exams..., In a chemistry exam for example, students were asked how to treat a patient with a hurt burn. Most of them failed and claimed that it was a biology question not knowing that it was all about chemical reactions (neutralisation)…, this was an evidence that students are taught without using real-life examples and so they fail to think along the CBC principles…" **National Curriculum Developer**

Furthermore, the implementers of the CBC at the school level are not aware of when to assess knowledge and when to assess skills. There are limited resources in terms of time and expertise on how to teach and assess life skills.

"The assessment of knowledge and skills should occur concurrently. If you are teaching how to plant maize using specific measurements…, after the lesson, students should go and practice the knowledge to develop the requisite skill accurately and timely…, [thus] we use guiding questions, which are practical oriented…, so we teach and assess, teach and assess…, [thus] practicing learner-centred teaching approach and learner centred teaching assessment…, whenever assessing skills using the CBC…," **National LA implementer**

There is also a lack of a standardised tool as well as lack of examination specifically meant for assessing life skills across different levels within the formal education system. This has led many actors practising life skills not assessing them. Should the assessment tools exist, they are not coordinated, and thus different actors use different tools and the results are not communicated to the right audience. Presentation of the findings to the right audience, particularly policymakers, middle level education leaders and classroom practitioners (teachers) improves their practices and those of their beneficiaries (students) while advocating the existence of such a tool.

Another challenge is that the existing tools largely assess literacy and numeracy skills demanding for the need to assess language speaking and listening skills. This gap is not addressed in our current assessment modalities.

> *"Our education system still faces challenges in assessment as it does not cover all the aspects. For example, in a language subject, the assessments largely focus on the writing skills but there are no exams meant to assess speaking and listening skills…"* **National Education Agency official**

4.5.3 Awareness of the ALiVE tool

Most of the participants were not aware of the ALiVE tool, even any other LA tool meant to assess life skills, except few that happen to work as stakeholders along the design and piloting of the ALiVE tool.

> *"There are also other stakeholders who conduct LA in the country, for instance the ALiVE project – that is intending to assess those life skills in three countries – Tanzania, Kenya and Uganda. They assess life skills to adolescents, for instance collaboration, self-awareness, problem solving, and values – issues of respect, etc. This project intends to assess those life skills for both children in and out of school children but at house-hold level, their model is such that they go to families and assess those life skills for children…adolescents aged 13 to 17…, This is a project done in East Africa. Here in Tanzania it is has been done in Zanzibar, and recently they will come to Tanzania mainland…,"* **Higher Education Institution Researcher**

Study participants further had the following to say regarding the objectives of the ALiVE tool.

> *"Thus, you will see that the main objective of ALiVE project is not only to assess children's life skills, but also to see how we can measure these constructs and adjust our curriculum to make sure that it includes these components into assessment. Eventually, the ALiVE results will inform policy and practice in terms of what and how to assess life skills and how to integrate them into the national curriculum, and if curriculum development unit will find it useful, it will then disseminate it to different stakeholders, including government stakeholders for instance the ministry of education itself…, and finally each stakeholder will be in a position to know how to utilise these data to inform practice and policy…"* **Education Researcher/expert.**

On the design of the tool,

"We were contacted by Milele Zanzibar foundation…, (this is a private sector) to collaborate…, to design a tool to assess the level of competence in life skills among youths out of school…, we supported them by adding our inputs to improve the tool…, it all went well and we are continuing doing that…, with the right dissemination platform, stakeholders can buy in the tool…, then can use it for the benefit of the nation…, this is the essence of having projects..." **National LA implementer**

For public ownership and understanding of the ALiVE tool, there is a need to create awareness about the tool to the key LA actors. Dissemination of the ALiVE findings could also enable the public to learn more on how the related results could inform policy and curriculum practices.

4.6 Recommendations

4.6.1 Development and assessment of life skills in the Tanzania education system

First, since life skills are integrated in other subjects across all levels of education, there is a need to teach specific life skills and design relevant practical assessments using standard tools or a special assessment form or a checklist. Skills development should, therefore, be nurtured, talents should be recognised, and possession and/or demonstration of a specific skill should also feature as a career progression and an outcome from our education system. Teachers should also be oriented towards the teaching and assessment of these skills through both continuous school assessments and summative assessments. Furthermore, grades for specific skill(s) should be reflected in the national examination certificates for students, education policymakers and education practitioners to attach value to life skills.

"We have good talents…, [students], but we do not develop them…, no further follow up…, we have artistic students, who can draw…, then what for?... they are just awarded for example a certificate…, that is all…, before we used to retain them to teach others…, we no longer have that mandate…" **National LA implementer.**

Second, since skills are not assessed explicitly in the current education system, there is a need to integrate skills in the teacher education curriculum to enable pre-service teachers learn about skills and how to teach and assess them to the required standard for further implementation. CPD should also be conducted to in-service teachers to enable them master the skills basics and how to assess them.

"There is a need to conduct more training to in-service teachers on how to use skills assessment tools…, [Indeed], skills should be taught to pre-service teachers at all levels from the pre-primary level…, that way teachers will grow knowing the importance of skills…, and deliver the same in classroom…, the curriculum should also be reviewed to include these assessments because most of time, teachers are just being creative to find their own ways of assessing skills…" **Higher Education Institution Researcher**

Third, given the diversity of disabilities and/or special education needs, there is a need to assess learners considering their abilities.

> *"We have learners with special needs in our schools…, the existing assessment modality does not consider their special needs…, we are forcing them to memorise…, to do written exams…, learners with special needs should have their own system…, if we are assessing English, we should look for English experts, they should come during English session…so that the learner can sit for this assessment…, and the goal here must not be time rather it should be about what the learner has mastered"* **Head of Special Education School**

Also:
> *"When it comes to results… they shouldn't be ranked comparatively with other regular schools…the assumption is that they have failed… we have communicated this to the education authorities…but it is not happening…"* **Head of Special Education School**

4.6.2 Successful implementation of a life skills learning assessment

First, during design, there is a need for a contextualised tool to enable for assessment of life skills and a manual to guide the process among the implementers across different levels. Tools must be designed by experts in collaboration with the key actors. In Tanzania, the national agencies, particularly Tanzania Institute of Education (TIE)[45] and NECTA[46] specifically the Research and Evaluation Unit[47] are key to developing national LAs. These actors should be involved from the design, piloting and implementation of any LAs. These agencies fall and reports to the Commissioner of Education at the Ministry of Education level. Other key actors include middle level policymakers[48] who oversee the tool administration process, practitioners[49] who participate in designing and piloting the questions and the development partners who offer expertise along designing the tools.

Regarding preparation of manuals, the national Standard II LA prepared manuals for each K to guide its implementation, with the same reflected in a tablet for practical use by teachers and students.

> *"The questions were designed by NECTA experts, in collaboration with classroom teachers who were also moderators, TIE, higher education experts, teacher colleges, secondary school teachers…, we conducted a stakeholders' workshop to design the tools…, the tools were later programmed in tablets…, there is a tablet for a teacher and a tablet for every student…,"* **National LA implementer**

There is also a need for having a manual for the enumerators to guide the data collection process in case technology is not used. There is also a need for having coordinators at local level where the data is collected to monitor progress during data collection process.

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[45] which focuses on teaching through curriculum development
[46] which focuses on assessment and feedback
[47] This unit focuses on LAs within NECTA
[48] Regional Education Officers, District Education Officers, Quality Assurers, Ward Education Officers, Heads of Schools
[49] Teachers

"LAs are very large scale research, you can't afford to get people with bachelor degrees in every village to conduct these assessments..., we therefore train them, they master those tools very well…then we give them manuals during these trainings so that they can go and read them for further familiarisation as they conduct the assessments…, then we look for people to monitor the data collection and assessment process at the local level…, we call them coordinators, so we work with district coordinators, assistant district coordinators as well as regional coordinators...," **Teacher**

Accordingly, alongside the design, there has to be a benchmark upon which to compare the results, particularly some standard criteria to demonstrate the level of mastery of a particular skill. For the case of the national Standard II LA, speed and accuracy of a skill are the criteria.

"We estimated with accuracy that a hard-working child can clean a 10-meter square environment accurately [to the required standard] within two minutes…, we established for this possibility, we found that this is possible if a child is aware and is a hard working…," **National LA implementer**

In addition, to measure accurately learner's competence on a certain skill, for example, numeracy, there has to be several questions to assess the same skill in order to measure accurately the mastery of the skill by an individual learner.

"We use five questions to assess for example numeracy…., students can thus get either 1/5, 2/5, 3/5, 4/5 or 5/5 with this range enabling us to measure accurately the competence of the learner versus asking only one question…," **National LA implementer**

Once the tool is designed, it also needs to be reviewed to align with the changes in curriculum and new education reforms prior to another administration.

"Every year we just improve by either removing some of the variables or adding some new variables... changes also arise due to changes in the curriculum…, even textbooks are changing with the change in curriculum…, so we usually update our tools in every assessment round…," **National LA implementer**

Secondly, during implementation, there is a need to use technology, particularly tablet to accurately measure the speed and accuracy while at the same time receiving immediate feedback from an individual learner as they engage in the assessment. The use of technology saves the tool administration time, the data coding process and the analysis.

*"We use tablets to administer the National Standard II LA, tablets speed up the assessment process…save the time for teachers to write on the blackboard…, time for marking…, recording…, their role is to guide students to respond to the set questions…, enabling them to establish areas of improvement…, but we have few of these tables …,"* **National LA implementer**

For technology based LA tool, capacity building to enumerators is also paramount.

"We spent five days to orient teachers as [implementers of the tool] to the assessment process…, two days for learning and practicing the tool using the tablet, two days for implementing the tool in the actual classroom and the fifth day was used for evaluation…" **National LA Implementer**

"With the tablet, students are registered…, the teacher, also an assessor can know that this learner has finished the assessment…., this learner did not do this question…, this makes it possible to also establish the weaknesses of an individual learner…, and they receive individual feedback immediately…, and that of the whole classroom…, with the findings informing the teaching and learning process…," **National LA Implementer**

Figure 3 presents a summary of the recommendations reflecting the themes given more weight (in terms of frequency) across the study towards improving the utilisation of life skills LA such as ALiVE. From the summary, close monitoring after dissemination of the LA results received higher percentage. This is followed by capacity building to different education practitioners (teachers, curriculum developers, policymakers) towards the understanding of LAs that integrates the assessment of life skills. The capacity building goes hand in hand with designing skills strengthening programmes including curriculum review, creating awareness about the relevance of life skills, and integrating it in the curriculum of teacher training and other levels of education. With the skills development programmes strengthened, including mechanisms of assessing them, a coordination of the existing tools will be harmonised, making it possible to have a standardised tool for assessing skills. Finally, digitising LAs will significantly save time and resources meant to administer the life skills LAs.

Figure 3: Recommendations to improve development & assessment of life skills LA
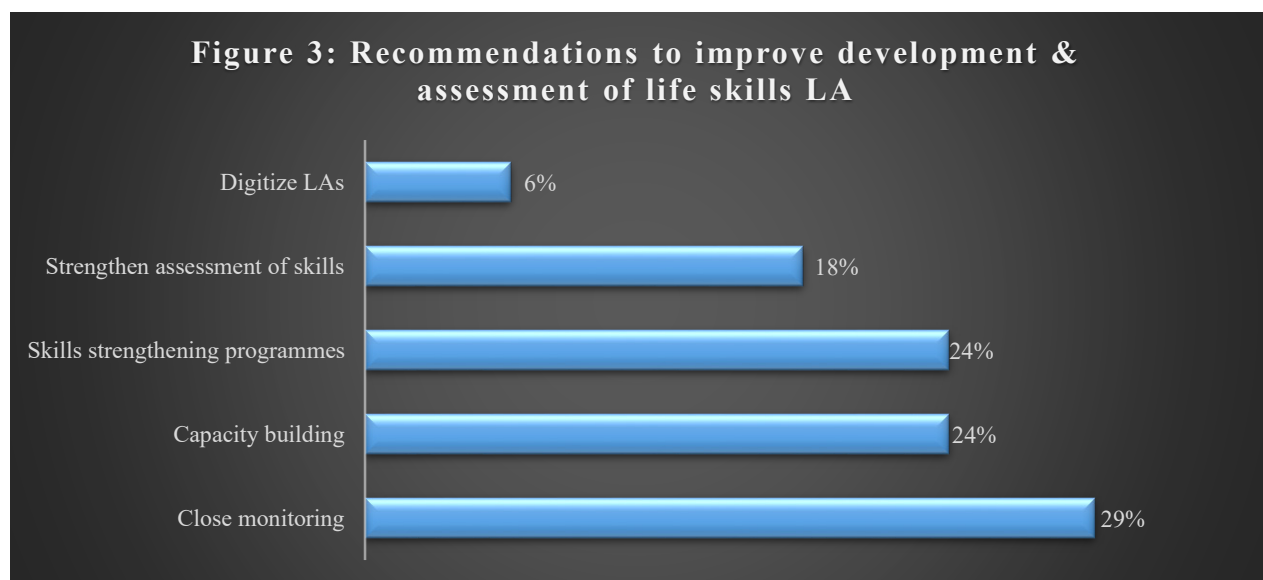
Chapter 5: Conclusions, discussions, and recommendations

5.1 Conclusions

The formative study aimed to establish how past learning assessments have been used to inform policy reforms and practices in Tanzania. It was also important to establish the barriers and enablers for evidence-based decision making with the objective being to inform the utilisation of the ALiVE LA findings along implementing the ADAPT project.

5.2 Key lessons

5.2.1 Data-driven decision-making from past and present national and regional learning assessments in East Africa: The case of Tanzania

At the national level, data from the Learning Assessments (LA) have been used to drive decisions with this reflected from the UWEZO LA (conducted for six years consecutively from 2010), the multinational LSLAs such as EGMA/EGRA and MELQO (2012-2016) and the National Standard II LA (2019). The decisions include the review of the early grades curriculum, introduction of pre-primary education with these happening from 2016 in Tanzania. The government agencies also developed the LA expertise through their participation in the EGMA/EGRA and MELQO LAs, with the experience enabling NECTA as a national agency to implement the first national LA in 2019. Data from the National Standard II LA based on the gaps established have been used to allocate areas demanding project interventions to improve children learning outcomes. The success of the past LA experiences was, however, dependent on various factors ranging from the involvement of the government agencies along the tool development, administration of the tool, thorough analysis and reporting. Furthermore, the dissemination of the report results to diverse stakeholders and closer monitoring of the progress after the dissemination was extremely important for improved practice and systemic change. For learning purposes, the ALiVE team can work with experts in LAs in Tanzania particularly NECTA and the mentioned actors (UNICEF, UNESCO, Shule Bora and Jifunze Uelewe) as well as UWEZO to borrow their experiences on how to analyse the data, prepare dissemination reports, how to widely disseminate the findings as well as the modalities for making closer follow-up after the dissemination.

5.2.2 Using past assessment experiences to strengthen learning community in East Africa: The case of Tanzania

To strengthen the dynamic learning community in East Africa, the voice of the community has to be strengthened. Findings show that working as a dynamic team and raising a voice as one, makes it more effective to advocate for key concerns such as the assessment of life skills, which is yet to be done explicitly in the formal curriculum, for the case of Tanzania. Indeed, there has been a lack of coordination among various skills development actors making it challenging for individual voices to be heard. In this regard, there is a need for all actors involved in skills development to work in collaboration with the government along different skills development interventions. The dynamic community of East Africa can be strengthened by learning from the UWEZO citizen-led assessment about their dissemination strategy and if possible , adopt it with modification considering country contexts. Fortunately, UWEZO has also been operational in Kenya. The community can learn best practices regarding the sampling procedures, data

collection formalities, analysis, reporting and the dissemination modality as further explained.

On the sampling, they can work with the National Bureau of Statistics to get data that will enable for the generalisation of the findings across all the regions for the case of Tanzania and/or across East Africa. Likewise, during data collection, the enumerators have to demonstrate requisite knowledge and skills and should be trained to ensure that the data collected is accurate and relevant. It is also very relevant for experts to analyse the data considering the target group so that diverse reports are prepared considering the audience. Preparing a dissemination strategy that stipulates the related objectives, target group, activities and timeline as well as monitoring plans will enable for strategic public outreach of the LA results. Prior to dissemination, the report has to be shared to the key policymakers including political decision makers, LA technical experts and ministry departments given their roles towards informing the decision makers at the national level. Accordingly, during the dissemination process, diverse stakeholders have to be involved at different levels from the national, district and the school levels. The dissemination events have to be supported with commitments from the stakeholders for their action. The action points should form the basis for conducting monitoring visits along the implementation of the dissemination strategy.

5.2.3 Utilisation of learning assessments: Key actors and networks within the Tanzania educations system

Regarding the key LAs actors, the actors include the national examination agency of Tanzania particularly NECTA and donor agencies specifically UNICEF and UNESCO, most of who implement LAs as donor funded programmes. The actors administered EGRA/EGMA and MELQO and focused on Standard II by and large. Regarding the utilisation of LAs results in Tanzania, the formative study concludes the following on how learning assessments have been used.

Policy agenda setting

One stage of policymaking process is agenda setting, where an issue to be discussed brings a public dialogue among different actors. Findings from the LAs are used for setting education agenda as they comprise among the issues to be discussed under a public dialogue for further policy action. In Tanzania, LAs such as UWEZO, EGMA and EGRA have been conducted with the release of the findings bringing a big public dialogue regarding the learning outcomes of the early grade children. Findings from UWEZO, for example, show that children are in school but are not learning. UWEZO findings were supported by the EGMA and EGRA findings as done by the RTI in 2013 and 2016. The findings prompted the review of the early grades curriculum to enable for the mastery of the 3Rs among children with this supported with continuous profession development of early grade teachers. The findings from these LAs, made the government see the relevance of having a national LA, with this realised by the development of the national Standard II LA implemented in 2019 in Tanzania. While the former LAs did not assess 21st Century skills, the National Standard II LA adds another K in the KKK, enabling for the assessment of skills at this grade. In Tanzania, we also experienced the introduction of a compulsory early grade education (pre-primary education) in all public schools with this beginning in 2016, also stipulated

in the Education and Training Policy (2014). The stipulation also aligned to the Sustainable Development Goal (4) regarding the provision of quality education. Particularly in 2015, 160 governments around the world adopted a specific target on Early Childhood Education (ECE) included in the Post-2015 Sustainable Development Goals (SDG), Goal 4 (4.2) which ensures that, by 2030, "all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education"[50].

Design of interventions
Other utilisation of the LAs findings include the design of project interventions such as Teaching at the Right Level as well as allocation of areas for project interventions at the country level. Projects such as Shule Bora and EPforR, for example, were allocated in areas that demonstrated poor learning outcomes with this determined by the LAs results. Education programmes for training early grade teachers have also been introduced, for example, the Open University offers diploma in Early Childhood Education so is the University of Dodoma. Indeed, there was no scheme for the cadre of early childhood education in Tanzania, with the assumption that primary school teachers could as well teach pre-primary children. Plans are also underway in other higher education Institutions to introduce education programmes for early grade teachers at the certificate, diploma, degree and postgraduate level along the national qualification framework. Projects targeting capacity building to early grade teachers have also been introduced such as the project done by the Tanzania Teacher Union and the Education International of the Belgium, "Developing educators, improving early learning in rural Tanzania" implemented in Chemba and Mpwapwa districts from 2017-2021. Through the project, almost 400 early grade teachers were trained to a Diploma qualification through the Open University Diploma in Early Childhood Education programme. In Tanzania, initiatives targeting the provision of early grade education services have also increased among local and international NGOs. These include the Children in Cross Fire, Children Book Project and Pestallozi Foundation, to mention a few. LA findings also informed the national development programmes such as Education Sector Development Programmes across all levels of education.

5.2.4 Best practices and lessons in the utilisation of learning assessments across East Africa: The case of Tanzania
On the best practices, the LA findings contributes to education sector reforms at the policy and at the practitioners' level. For this to be realised, diverse actors have to be involved from the tool design, implementation, analysis, reporting and dissemination. Barriers such as reliability of the data, relevance of the information provided considering context, financial and technical capacities, coordination and dissemination channels as well as political and institutional factors may negatively affect the utilisation of the LA results by policymakers. Uganda demonstrates one case where data were not accepted by policy makers, making it important to revise the findings prior to utilisation by the policy makers. For the utilisation of the ALiVE LA findings, challenges such as the conceptualisation of skills among the diverse stakeholders has to be harmonised.

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[50] Global Monitoring Report, UNESCO, SDG Goal 4. Available at: http://en.unesco.org/gem-report/sdg-goal-4

There is also a need to coordinate existing initiatives meant to address skills development in order to communicate the same language when it comes to skills development and assessment. Other challenges include building the capacity of teachers as the main developers and assessors of skills in the education system. This is important now that skills are not integrated in the teacher education curriculum as an explicit subject. Government is however supportive of the skills initiatives endeavours and with the ongoing curriculum review, progress towards skills development and assessment are foreseen.

5.2.5 Ways to support policymakers at the national level to integrate ALiVE improve curriculum design and delivery data-wise

The formative study findings show that the ALiVE tool is not familiar to many. While NECTA came across the tool, they were engaged as representatives in the process but not for the purpose of ownership and integrating the tool into data-driven decisions. In this regard, it is important to first create awareness about the ALiVE tool to the key stakeholders from the national level, middle level policymakers and at the school level. The awareness creation should be supported by the capacity building to the practitioners at the school level and at the middle level policymakers (quality assurers, tutors, district education officers and teachers) about the broader conceptualisation of skills, relevance of assessing skills and the significance of the ALiVE tool in the process. The capacity building component for the stakeholders should also focus on how they can utilise the LA results effectively.

Since the tool will be applied across East Africa, the design of the tool reflecting the content should also align to the policy stipulations of each country to enable for ownership. The stakeholders should be involved during the tool administration and have to be informed that they will be involved during the dissemination for more comments and inputs.

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Annex 1: Successful policy influence by two NGOs in Tanzania

Case I: UWEZO Tanzania

UWEZO as an independent NGO[51] since 2011 has been conducting households' assessments to generate data and curate evidence on actual literacy and numeracy competency levels among children aged six-16 in a manner that informs the public, stimulates countrywide debate, and creates pressure for policy change from the bottom-up. UWEZO uses the citizen led learning assessment approach and methodology pioneered by Pratham organisation through their Annual Status of Education Report (ASER) in India. The assessment tool has been adapted to the Tanzanian context. Trained citizen volunteers carry out learning assessments on children's competencies in literacy and numeracy at the households. Table 2 reflects the number of regions and children that participated in UWEZO assessment since 2011.

TABLE 1: SUMMARY OF UWEZO SURVEY ROUNDS AND COVERAGE 2011-2017

YEAR	REGIONS	DISTRICTS	EAS	HOUSEHOLDS	CHILDREN REACHED
2011	21	132	3,825	57,945	110,435
2012	20	125	3,752	56,106	105,352
2013	25	131	3,844	52,808	104,162
2014	25	45	1,313	16,013	32,694
2015	25	159	4,750	68,588	197,451
2017	26	56	1,677	25,532	64,639

Source: Calculated from data from the 2011 to 2017 rounds of the Uwezo ALA

The UWEZO data been used to inform policy and curriculum reforms regarding teaching of 3Rs. In particular, UWEZO has used the assessment evidence to experiment and conduct innovative interventions that demonstrate what works to improve learning outcomes, especially on literacy and numeracy skill. UWEZO also initiated the Jifunze intervention in Tanzania that adapts Teaching at the Right Level (TaRL) approach. TaRL approach has proved to be cost effective and efficient to help children develop basic reading and numeracy skills within 30-60 days and thus addressing learning gaps (UWEZO, 2019). TaRL approach is based on the basic pedagogical principle that regardless of age or grade, the starting point for effective teaching and learning is children's current ability or skill level. UWEZO Tanzania has developed and piloted the Jifunze learning initiative that adapted the Teaching at The Right Level (TaRL) in six districts with great rapid results. Among the children who had poor reading and numeracy skills, and enrolled to UWEZO Jifunze/TaRL learning camps, 83% of them improved and were able to read a Kiswahili story and do simple numeracy operations of grade two level within a period of 30-60 days (UWEZO Tanzania TaRL, 2020).

TaRL approach can as well be used to promote continuous professional development

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[51] Uwezo meaning "capability" in Swahili, was established since 2010 as a nation-wide citizen led learning assessment initiative in Tanzania.

(CPD) for teachers in primary and secondary schools (Alabi, 2017) and pre-service teacher training (Akyeampong, Pryor, Lussier, and Westbrook, 2011). In Tanzania, initiatives to contextualise TaRL through CPD have already made milestones. The TaRL approach is now reflected in the Tanzania CPD framework (URT, 2020). CPD package embracing TaRL enable teachers to engage in ongoing professional learning and develop required teaching competence. Already various countries have adapted the TaRL approach, including Zambia, Botswana, Mozambique, Nigeria, Kenya and Senegal among others demonstrating the confidence in TaRL approach as a game-changer in improving learning outcomes in Africa. In Tanzania, the CPD initiatives such as Elimu Bora (Quality Education), Tusome Pamoja (Lets' Read), Right to Play, and School-based In-service Teacher Training do not integrate transformative teaching approaches such as TaRL (Hardman et al., 2015), making the UWEZO initiative unique.

Case II: Room to Read Initiative
(https://roomtoread.betawebserver.com/countries/tanzania/country-summary/)

Room to Read[52] is a global organisation bringing systemic transformation in the lives of millions of children in low-income communities within schools placing emphasis on two most critical periods in a child's schooling: early primary school for literacy acquisition (the Literacy Programme) and secondary school for girls' education (The Girls' Education Programme). To date, Room to Read has benefited 16.8 million children across more than 37,000 communities in 16 countries including Tanzania (Room to Read report, 2019). In Tanzania, Room to Read focuses on both literacy and girls' education. Room to Read initiatives provide evidence and support towards bringing systemic change in the Tanzania Education system and improved practice. The Room to Read's Literacy Programme in Tanzania[53] is a school-based intervention that seeks to develop children's reading skills and a habit of reading in early primary grades to help them become lifelong and independent readers. The Literacy Programme includes three main components: (i) reading and writing instruction for children in grades 1 and 2; (ii) establishment of child-friendly school libraries to provide children with access to reading materials; and (iii) the development of quality reading materials for children and supporting to develop best practices in early literacy instruction. The programme has led the government to introduce a library period in Room to Read-supported primary schools for individual, paired and shared reading before checking out books.

To monitor progress (R2R, 2020) Room to Read Tanzania conducts classroom-based assessments of children's literacy skills, referenced as Student Tracking (ST) twice in a school year for both Grades 1 and 2. The assessments' objective to understand what children have learned from what has been already taught in the grades at periodic intervals and inform teachers about children's progress. Previously, Room to Read methodology to conducting the classroom-based assessment included a modified EGRA that is administered orally by the teacher and Room to Read's Literacy Facilitator on a census basis (all Grade 1 and 2 children in Room to Read supported schools). Due to very high class sizes in early grades in Tanzania, the administration of each round of ST in Grades 1 and 2 with all children on an individual

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[52] Founded in 2000 on the belief that World Change Starts with Educated Children
[53] Which started in Tanzania in 2012 in the Morogoro Region, it has now reached Pwani and Tanga regions

basis in all intervention schools has been a time consuming and resource intensive activity task that did not provide results as quickly as desired from a monitoring level activity. In 2020, Room to Read Tanzania piloted an alternative for the individually administered ST in the form of Group Administered Learning Assessment (GALA), where all children present in a classroom were assessed together utilising an instrument that is intended to mirror the skills assessed by EGRA, but with a written group administration.

The objective of the pilot was to assess the feasibility of GALA in replacing the ST in all Literacy Programme schools in Tanzania soon. The GALA pilot was conducted in a select set of intervention schools in both Grades 1 and 2 twice in 2020 using a tool prepared by Room to Read. A key part of the pilot design is that there will be a concurrent administration of the current ST instrument to a subset of students to assess the concurrent validity of the GALA tool and the existing ST tool as well as establish the relationship between the GALA scores and the EGRA scores.

Accordingly, Room to Read has supported system-level change in Tanzania by developing high-quality teaching and learning materials (116 fiction and nonfiction books for students in Grades 1 to 4, and scripted lessons for teachers to use in literacy instruction for all four grades). Accordingly, Room to Read partnered with RTI International and the ministries of education in Tanzania to improve Swahili-language teaching and learning materials in the country as part of USAID's Tusome Pamoja (Let's Read Together) project. The materials were shared in 3,000 local primary schools, supporting an estimated more than 1.4 million children. Room to read also aims to ensure girls complete secondary school and are trained in Life Skills necessary to enable them to negotiate key life decisions. In this regard, since 2018 Room to Read has introduced an innovative Financial Education Life Skills (FELS) club in Tanzania where 2,722 girls at 10 schools were supported with impressive increases in girls' financial and entrepreneurial knowledge only during the first year of the project. FELS clubs focus on financial empowerment, inclusion, and literacy for girls.

Annex 2: About the Consortium

Consortium Lead: The Global e-Schools and Communities Initiative (GESCI) is an international non-profit organisation founded on the recommendation of the United Nations Task Force on Information Communication Technology (ICT). GESCI was established in 2003 at the first World Summit on the Information Society. It works with governments and partners in providing strategic supports to develop and implement models of good ICT-based practice for high-quality education & training and to build effective leadership abilities in ICT and Knowledge Society development among government officials across the developing world. GESCI also works to contribute towards building a knowledge society for all based on the principles of equal opportunities, inclusiveness, empowerment, accountability and sustainability. GESCI's role in this consortium is the overall management and implementation of the project. This will include but not be limited to leading all aspects of project coordination, knowledge generation, knowledge mobilisation, coordinating capacity building, the learning agenda and advocacy particularly in Kenya and Tanzania where it has physical presence and has built social capital within the education sector.

Partner 1: College of Education and External Studies, Makerere University (CEES), Uganda. As the oldest and one of the largest teacher training facility in the East African Community (EAC), the College of Education and External Studies (CEES) is well placed to collaborate and advise government and has great resonance with educators, community workers, administrators, inspectors of schools, curriculum designers and community outreach implementers to work at all levels and forms of the education system. It also focuses on the provision of adult, continuing, community, open, distance and e-learning. The college is respected as a centre of excellence in the development, research and application of professional educational approaches in response to national and global needs. CEES leads project implementation in Uganda.

Partner 2: The University of Notre Dame's Global Centre for the Development of the Whole Child (GC-DWC) collaborates with researchers and practitioners around the world to ensure the wellbeing — physical, emotional, social, and cognitive — of children and adolescents in low-resource and conflict-affected settings. Using an innovative whole child development approach tailored to context-specific needs, GC-DWC translates research into timely and thoughtful action, adapts research tools to improve the development of learning programmes and policies, and activates systems (families, schools, communities) to ensure that children and adolescents can thrive. GC-DWC has previously led global measurement and learning consortia and is currently part of global working groups around social and emotional learning and skills development for children and adolescents. As the global knowledge leads in this project, GC-DWC leads in knowledge translation and capacity building components.

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