

APPENDIX A

Teacher Interview 1 Protocol

This interview is the beginning of a study about how teachers use the national syllabus, exams, and resources to design their lessons. I am so grateful to you for being a part of this study. It is our hope that this research will help teachers around Namibia and SADC (Southern African Development Community) to more efficiently and effectively plan and enact instruction.

1. Can you tell me about your background in education and how long you have been teaching?
2. Why did you go into teaching?
 - a. Additional prompts: Think back to before you became a full-time teacher: Are you teaching the subjects and with the types of students that you had originally planned to teach? Are you teaching in the type of school/school location where you have originally planned to teach?
3. What do you expect of yourself as a teacher?
4. What does the school and MOE expect of you as a teacher?
5. What are some of your favorite topics to teach within your subjects?
6. Where did you have opportunities to learn about or study teaching?
7. What topics and content do you teach within your subjects? How do you decide what topics and content you will teach within your subjects?
8. How do you decide what approach you will take to teach a topic?
9. What is your definition of science?
10. How do you define learning in science?
11. How do you design learning experiences for your students?
12. If not yet addressed:
 - a. How do you use the national standards in your planning? In your teaching?
 - b. How do you use textbooks in your planning? How do you use them when you are teaching?
 - c. How do you use national examinations in your planning? How do you use them when you are teaching?

To continue on in this study, for the next four weeks, you'll submit a reflection on your teaching each week through WhatsApp. With that you'll also send through your lesson plans for the week as a document or as a picture of a written copy.

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Teacher Interview 2 Protocol

Thank you so much for sending through your lesson plans and reflections in September and October. The purpose of this interview is so that I can follow up on all the information you have graciously provided so far.

1. Please describe your learners and your school.
 - a. Additional prompts: How many learners do you have in your classes? What resources do you have? What resources do you need? What grades are taught in your school?
2. What is your favorite lesson you've taught?
 - a. Additional prompts: How did you teach it? What was the content? What did learners do? Why was it your favorite? In your favorite lessons, what are you doing? In your learners' favorite lessons, what are you doing? What are they doing in these lessons? What does good teaching look like? Where does this definition come from?
3. What was your least favorite lesson you taught?
 - a. Additional prompts: How did you teach it? What was the content? What did learners do? Why was it your least favorite?
4. What does it mean to "deliver?"
 - a. Additional prompts: What is a teacher doing? What are they delivering? How are they delivering it? Are the learners also delivering something? What?
5. How would you describe your teaching?
 - a. Additional Prompts: When you are in the classroom, what are you doing? What are the learners doing? How were you directed to teach this way, or are there tensions between the way you are expected to teach and the way you do teach? Why?
6. How do you think your teaching is connected to learner centered pedagogy?
 - a. Additional prompts: How would you define learner centered pedagogy?
7. How do you prepare learners for examinations?
 - a. Additional prompts: What teaching methods do you use? What resources do you use? Where did you learn to do this?
8. How does your school leadership and regional support personnel think quality teaching looks?
 - a. Additional prompts: Is this in line with national LCP policy, or assessments policies? Is this aligned with what you believe about teaching?

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9. Can your learners handle this kind of teaching?
 - a. Additional prompts: Where do they get stuck? How could their barriers be overcome?
10. How is the national curriculum (syllabus, standards, exams, textbooks) compared to your home country and education when you were growing up?
 - a. Additional prompts: (If foreign, where are you from?) Who was running schools when you were a child? Where did you go to school? What were exams like? What was class like? What did you like about school when you were a child; what did you not like?? What do you think your learners like about school now; what don't they like?
11. What has changed in this new curriculum for Life Science in particular?
 - a. Additional prompts: Are there different expectations for instructional practice (e.g., different expectations for practical work and assessment)? How have the assessment practices changed? Have they changed in form or substance or both? Is the content appropriate and relevant to learners?
 - b. What do you think of these changes?
12. What is the most important content in life science for your learners?

Additional prompts: Is this reflected in the exams/syllabus/textbooks? Is this reflected in the real world?

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All Documents Included in Analysis

Document	Year	Source	Role in Polityscape	Pages
Included in Round One Only				
Addis Ababa Action Agenda of the Third International Conference on Financing for Development	2015	United Nations	Establishing funding streams for development (establishing investments in capacity building)	68 pages Global
The Structure of Basic Education (Pre-Primary to Grade 12)	2015	NIED	Policy for subjects in each phase and grade of Namibian education, policy for promotion from grade to grade	4 pages National
Statement about the curriculum reform for basic education	2015	NIED	Connecting curricular reform to the Incheon Declaration, SDG4, and the first Harambee Prosperity Plan, and each of the aspirations in Vision 2030; does not mention Cambridge benchmarking	6 pages National
Benchmarking Cambridge International AS and A Level: Summary of Findings on Global Perspectives and Research	2016	National Recognition Information Centre for the United Kingdom	Provided context for how one AS Level course (Global Perspectives and Research) was evaluated using active strategies of conducting inquiry; these expectations for application of content are not reflected in Namibian examinations	4 pages Global
Namibian Education Reform Forum Journals	2018-2022	NIED, UNam	Namibian education research and reform journal, many articles on science practicals and applied learning in Namibian contexts	56-103 pages National
Home and relevant pages about projects in Namibian education	2022-2023	World Bank, UNESCO+ Subsidiaries, UNDP, MCC, JICA, SADC, Cambridge International Websites	International agenda setting, funding Namibian education projects, Benchmarking national syllabi and assessments, professional development for Namibian educators	All
Included Through Round Three				
<i>Toward Education for All</i>	1992	MOE	Provide a development brief for education, culture, and training	137 pages National
<i>A Framework for Action in Sub-Saharan Africa</i>	1999	Education for African Renaissance in the 21 st Century	Regional leadership setting an agenda immediately prior to the Dakar Meeting	24 pages Regional/ Global

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<i>The Dakar Framework for Action</i> Education for All: Meeting our Collective Commitments	2000	World Education Forum (UNESCO)	Synthesizing input from 24 strategy sessions and regional EFA conferences; contains Jomtien Declaration from 1990	78 pages Global
Brief: Vision 2030	2004	Office of the President (Nujoma)	Setting the National Development Agenda for the coming 25 years	3 pages National
<i>Vision 2030</i>	2004	President	Setting the National Development Agenda for the coming 25 years	90 pages National
<i>Namibian Human Capital and Knowledge Development</i>	2005	The World Bank	Assessing and reporting on the state of Namibian development toward a Knowledge Economy	145 pages National/ Global
<i>Global Education for All Meeting Final Statement: The Muscat Agreement</i>	2014	UNESCO, Global Education for All Meeting	Establishing commitment of UNESCO countries to voice the “vision, principles and scope of the post-2015 education agenda”	4 pages Global
<i>State of the Nation Address</i>	2015, 2021	President Hage Geingob	Examining and updating the yearly national agenda	22, 24 pages National
<i>Incheon Declaration</i>	2016	UNESCO, UNDP, UNFPA, UNHCR, UNICEF, UN Women, World Bank Group, ILO	Updating the national agenda for education after Dakar Framework	83 pages Global
<i>What makes a quality curriculum?</i>	2016	UNESCO IBE	“Given the essential role of curriculum in enabling quality learning and in articulating and supporting education that is relevant to holistic development, our purpose in this paper is to identify what makes a quality curriculum, so as to support curricular innovation in UNESCO Member States to the end of the realization of Sustainable Development Goal Four”	41 pages Global
<i>Use of Learning Assessment Data: Namibia</i>	2021	UNESCO, International Institute of Educational Planning	Monitoring literacy and numeracy evaluation and data in Namibia	8 pages National/ Global
<i>Harambee Prosperity Plan II</i>	2022	The Office of the President	Establishing a short term (2021-2025) national development plan based on the “pillars” of effective governance,	104 pages National

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			economic advancement, social progression, infrastructure development, and international relations and cooperation	
Added for Round Two and Three				
Teaching and Learning: Achieving Quality for All Global Monitoring Report	2014	UNESCO Education for All	Monitoring Progress toward EFA goals; providing evidence for power of education “transform lives” with foundational skills, transferable skills for global citizenship	496 pages Global
Continental Education Strategy for Africa Indicators Manual	2015	AU, Association for the Development of Education in Africa	“Indicators have been identified and agreed upon by the African Union Specialised Technical Group on Education, Science and Technology based on how well they reflect the goals of the CESA Strategic Objectives and the targets of SDG4 as well as their feasibility for collection.”	69 pages Regional
Nairobi Declaration and Call for Action on Education	2018	UNESCO, AU	“Bridging continental and global education frameworks for the Africa We Want”	5 pages Regional
2nd Continental Progress Report on Agenda 2063	2022	AU Development Agency	Regional agenda setting; Monitoring of learning and development; Promoting African “Renaissance”	154 pages Regional
Teacher-Facing Policies for Fine-Grained Analysis				
Junior Secondary Life Science Syllabus, Gr 8-10	2010	NIED	Provide purpose, assessment structures, and specific basic competencies and required practical activities for teachers	48 pages National
Junior Secondary Life Science Syllabus, Gr 8-9	2016	NIED	Reformed purpose, assessment structures, and specific basic competencies and required practical activities for teachers	60 pages National
Life Science Examination	2011, 2017, 2021	DNEA	Assessing learning, multiple choice and short answer questions	27 pages National

Commented [Rv1]: Check this document out again on Friday AM... What's it got going on? First main UNESCO doc post-incheon... Also the next one.. So... where we at?

Note Bolded document titles were most salient in this analysis and contained direct references to quality teaching, learning, or content in relevant ways to shape implementation in the Namibian context

APPENDIX D

Coding protocols for Rounds 1, 2 and 3 of Analysis

ROUND 1 CODING

Code	Definition	Subcode	Examples	Details
Definitions of Quality	Concrete or abstract descriptions of what quality education is expected to be	Quality Teaching-Abstract	Learner-centered Teacher-centered Problem-solving Nature of Science Action-Oriented Facilitating Social Activity Democratic Compassion Efficiency Innovative Available (Equitable Access)	Content in this subcode provides broad direction for teaching in terms of the types of learning experiences teachers should be generating and the work teachers do. These definitions of quality teaching do not refer to specific methods of instruction which teachers could directly enact. Instead, content in this subcode indicates the underlying nature of quality teaching. <i>(Defining the act of teaching and learning experiences expected in quality classrooms)</i>
		Quality Learning-Abstract	Life-Long Empowering Poverty Eradication Knowledge-based society Productive Applied	Content in this subcode provides broad descriptions of what learning should accomplish when it is quality. These definitions describe the types of outcomes that quality learning would generate for individuals and society, and the broad outcomes learning should create. <i>(Defining the act of learning and the outcomes of learning expected from quality education)</i>
		Quality Content-Abstract	Relevant Knowledge and Skills Economic Participation	Content in this subcode provides broad descriptions of the types of content to be included in the classroom. <i>(Defining the inputs/substrates of learning expected in quality education)</i>
		Quality Teaching-Concrete	Modelling Whole class discussion Lecture Peer tutoring Group Work Practical Activities Exam preparation Inquiry Activity Science Skills and Processes	Content in this subcode provides specific directions for teaching and the format of learning experiences that quality teachers would create for learners. In the case of Namibia, “practical activities” refers to the specific activities listed in the syllabus and in the practical exams and can be thought of in concrete terms. <i>(Defining the act of teaching and learning experiences expected in quality education)</i>
		Quality Learning-Concrete	Exam performance Basic literacy Job training/TVET	Content in this subcode provides specific outlines of how learning should be demonstrated and what the specific outcomes of quality learning should be. <i>(Defining the act of learning and the outcomes of learning expected from quality education)</i>

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		Quality Content-Concrete	Indigenous Knowledge Benchmarked internationally/ Examined Environment Promotes health Nature of Science	Content in this subcode provides specific content to be covered in a quality classroom. <i>(Defining the inputs/substrates of learning expected in quality education)</i>
Tensions in enacting quality education	References to sources of tension, results of tensions, and solutions to tensions; Tensions surrounding the enactment of quality teaching, learning, and integration of quality content	Purpose of Education	Human right Modernization Peace Economic Development Poverty Eradication Productive Adult Life	References to the purpose of education, which may be at odds with each other or “clashing in the tapestry” <i>—This list of examples is still in progress, and a goal of this round of coding to outline and connect across the definitions and tensions.</i>
		Values	Individualism Equitable access/ Egalitarianism Respect Survival International Recognition <i>Many others also listed in definitions of quality</i>	Values espoused in the content that drive the definitions of quality education— <i>This list of examples is still in progress, and a goal of this round of coding to outline and connect across the definitions and tensions.</i>
		Modes of Influence	Harmonization/ Installing interdependence Imposition Institutions Standardization/ Credentialism Evaluation	The direct interactions or references to control over or power to determine the definitions of quality above. Goal of this round of coding: <i>Establish a visual for this subcode This might look more like a quadrant situation with like “High Coordination, High Control” “Low Coordination, Low Control” something from modes of influence literature to determine what the axes would be; Could also be a single scale from independent to dependent or laissez-faire to full control</i>
		Responsibility	Accountability Blame Credit	Content here would directly refer to giving <i>a constituent responsibility</i> over a task, and then explicitly blaming, giving credit, or holding someone (or a group) accountable to problems or solutions.
		Solutions for Tension	Community-diversity, egalitarianism Dissemination Sustainability Innovation(?)	Content here directly refers to <i>solutions to tensions in enacting quality education</i> . This will likely overlap greatly with modes of influence.
		Sources of Tension	Condescension Deficit Mindset Resources Time Curriculum Invalidity	Content here directly refers to sources of tensions impacting the enactment of quality education, or reflects a deficit mindset, or is inflected with condescension. <i>This content is red-flag-ey and is on-it’s-face contentious.</i>

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ROUND 2 CODING

Before round 2 of coding, input annotations below and make descriptor table of each document for the methods section/appendix				
Code	Definition	Subcode	Examples	Explained
Definitions of Quality	Concrete or abstract descriptions of what quality education is expected to be	Quality Teaching-Abstract	Learner-centered Teacher-centered Problem-solving Nature of Science Action-Oriented Facilitating Social Activity Democratic Compassion Efficiency Innovative Available (Equitable Access)	Content in this subcode provides broad direction for teaching in terms of the types of learning experiences teachers should be generating and the work teachers do. These definitions of quality teaching do not refer to specific methods of instruction which teachers could directly enact. Instead, content in this subcode indicates the underlying nature of quality teaching. <i>(Defining the act of teaching and learning experiences expected in quality classrooms)</i>
		Quality Learning-Abstract	Life-Long Empowering Poverty Eradication Knowledge-based society Productive Applied	Content in this subcode provides broad descriptions of what learning should accomplish when it is quality. These definitions describe the types of outcomes that quality learning would generate for individuals and society, and the broad outcomes learning should create. <i>(Defining the act of learning and the outcomes of learning expected from quality education)</i>
		Quality Content-Abstract	Relevant Knowledge and Skills Economic Participation	Content in this subcode provides broad descriptions of the types of content to be included in the classroom. <i>(Defining the inputs/substrates of learning expected in quality education)</i>
		Quality Teaching-Concrete	Modelling Whole class discussion Lecture Peer tutoring Group Work Practical Activities Exam preparation Inquiry Activity Science Skills and Processes	Content in this subcode provides specific directions for teaching and the format of learning experiences that quality teachers would create for learners. In the case of Namibia, “practical activities” refers to the specific activities listed in the syllabus and in the practical exams and can be thought of in concrete terms. <i>(Defining the act of teaching and learning experiences expected in quality education)</i>

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		Quality Learning- Concrete	Exam performance Basic literacy Job training/TVET	Content in this subcode provides specific outlines of how learning should be demonstrated and what the specific outcomes of quality learning should be. <i>(Defining the act of learning and the outcomes of learning expected from quality education)</i>
		Quality Content- Concrete	Indigenous Knowledge Benchmarked internationally/ Examined Environment Promotes health Nature of Science	Content in this subcode provides specific content to be covered in a quality classroom. <i>(Defining the inputs/substrates of learning expected in quality education)</i>
Tensions in enacting quality education	References to sources of tension, results of tensions, and solutions to tensions; Tensions surrounding the enactment of quality teaching, learning, and integration of quality content	Purpose of Education	Human right Modernization Peace Economic Development Poverty Eradication Productive Adult Life	References to the purpose of education, which may be at odds with each other or “clashing in the tapestry” <i>—This list of examples is still in progress, and a goal of this round of coding to outline and connect across the definitions and tensions.</i>
		Values	Individualism Equitable access/ Egalitarianism Respect Survival International Recognition <i>Many others also listed in definitions of quality</i>	Values espoused in the content that drive the definitions of quality education— <i>This list of examples is still in progress, and a goal of this round of coding to outline and connect across the definitions and tensions.</i>
		Modes of Influence	Harmonization/ Installing interdependence Imposition Institutions Standardization/ Credentialism Evaluation	The direct interactions or references to control over or power to determine the definitions of quality above. Goal of this round of coding: <i>Establish a visual for this subcode</i> <i>This might look more like a quadrant situation with like “High Coordination, High Control” “Low Coordination, Low Control” something from modes of influence literature to determine what the axes would be; Could also be a single scale from independent to dependent or laissez-faire to full control</i>
		Responsibility	Accountability Blame Credit	Content here would directly refer to giving a <i>constituent responsibility</i> over a task, and then explicitly blaming, giving credit, or holding someone (or a group) accountable to problems or solutions.
		Solutions for Tension	Community-diversity, egalitarianism Dissemination Sustainability Innovation(?)	Content here directly refers to <i>solutions to tensions in enacting quality education</i> . This will likely overlap greatly with modes of influence.

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		Sources of Tension	Condescension Deficit Mindset Resources Time Curriculum Invalidity	Content here directly refers to sources of tensions impacting the enactment of quality education, or reflects a deficit mindset, or is inflected with condescension. <i>This content is red-flag-ey and is on-it's-face contentious.</i>
Before round 3 of coding, cross check lists below with themes emerging from definitions, compress/expand/define; goal to triangulate around tensions with solutions				
ROUND 3				
Condensation	QLearning-A: Empowering Disempowering Qteach-a: Employment (from the pov of the learner) Production (from the pov of the nation or economy)	From: Qt-a: empowering; ql-a: empowerment; purpose: empowerment/productive adult life; economy, job training, job application, capacity building (referring to	Human right Entrepreneurship Peace	Promote health Empowerment Sustainable development
Cleaning	Capacity building (across qt-a, purpose) Integrated Flexible		Respect Survival	Diversity Environment Equitable access/Egalitarianism

APPENDIX E

Policy Recommendations to Promote Human Centers of Education

	Integrating Learners	Integrating Teachers	Integrating Community
Quality Content	LRC workshops for syllabus and pacing decisions Ability to address questions in class	Teacher workshops for syllabus and pacing decisions	<i>Reform Forum</i> practical integration, consultation with authors Setting TVET options at the constituency level
Quality teaching	Peer tutoring between grades 11 and 9 ECE programs with grade 12 internships in local ECE	Empowering teachers to facilitate applied learning Cross-curricular co-teaching Professional development with lesson study within and between schools	Internships and apprenticeships in grade 9
Quality Learning	Include CASS in promotional decisions <ul style="list-style-type: none"> • Application • Portfolio options (CASS) • LRC involvement in setting rubrics for CASS 	Include CASS in promotional decisions <ul style="list-style-type: none"> • Professional development with CASS activities to re-teach content to teachers (i.e., following the format from the Cambridge International partnership) • Professional development to establish CASS plans for each regional constituency • Teacher workshops at the constituency level to develop rubrics to assess CASS 	Community presentations of portfolios