



Monitoring and Evaluation of Climate Change Education and Communications in Sub-Saharan Africa: Insights from a theory-building systematic review



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MECCE Project (Monitoring and Evaluation of Climate Change Education & Communications)

Globally, there are limited understandings of *quality* CC Education and Communications.

There is also little clarity on appropriate M&E frameworks, which are needed to

Support intergovernmental processes to improve the quality and quantity of CCE&C.

MECCE responds with an international research-based partnership of 80+ scholars and agencies, funded by the Social Sciences and Humanities Research Council (Canada)

MECCE aims to advance global climate literacy and action through more and better CCE, training, and communications.

Rhodes University ELRC coordinates the Africa Hub for MECCE.



Methodology: Systematic Review



As part of the MECCE Project (Axis 1) ELRC researchers are undertaking Regional Knowledge Syntheses for Asia; Australasia; Europe; North America; Latin America & The Caribbean; **Sub-Saharan Africa, North Africa & Middle East**

A **systematic review** is a research method that identifies, appraises and analyses a body of existing research, to answer a clearly formulated question. The methods for selection and analysis are transparent and repeatable. A **meta-review** analyses other reviews. We used a critical realist, theory-mining approach (Okoli 2015a): “Carefully gathering material from past research ... as material for new theory development ... explicitly extract and synthesize the elements of theory from primary studies [or other reviews]” ... “**discern the latent theoretical concepts underlying apparently disparate empirical investigations to synthesize diverse yet commensurable primary studies**” (Okoli, 2015b).

Process: Google Scholar search of published (peer reviewed) literature – top 200 hits – review abstracts – select top 50 for deeper analysis.
Search terms: review + climate change education /climate change communications + [name of region]. **Searched for concepts and postulated relationships between concepts in these studies.**



Findings for Sub-Saharan Africa – Focus on farmers

CONTEXTS | METHODS USED | ISSUES AND CHALLENGES | COMMON CONCEPTS AND RELATIONS BETWEEN THEM

Contexts in which CCE&C take place in the region

1. Farming – mostly, subsistence farming
2. Formal education in schools & colleges
3. Universities
4. Governmental decision-makers
5. Public media



Methods used for CCC&E with farmers in the region

1. In last decade approaches moved beyond information provisioning & awareness raising to stronger public *engagement*.
2. Both face-to-face dialogic approaches (seen as more effective) and one way dissemination (seen as necessary due to the urgency and scale as well as resource constraints)
3. Radio, print media, television, mobile phone, online, community forums
4. On-farm demonstrations, demonstration sites, small-scale, interactive workshops
5. Specialised knowledge networks for dynamic knowledge sharing, foster social learning



CCE&C Challenges in Sub-Saharan Africa

Barriers: The barriers stalling climate change adaptation include -

- Poor extension capacity with limited attention to farmers' existing knowledge, experiences
- Lack of adequate climate/adaptation knowledge, forecasting information but also
- Lack of options especially in the face of resource limitations; farmers agency
- Social structures, power imbalances, gender inequality reducing women farmers' agency in particular
- Weak government and corruption (further reducing the available resources, opportunities)
- Barriers to collective action (e.g. lack of coordination)
- Cultural influences, mindsets; risk perceptions
- Offered courses/workshops are often not comprehensive enough
- Ineffective CCC widens gaps between knowledges and stakeholders

Concepts: Epistemological & Ontological Tensions

1. Relevance of adaptation vs mitigation – limits to both
2. In schools – learners have lived knowledge of climate change but lack technical concepts like “what are the GHGs?”
3. Farming practice is informed by an range of knowledges - practical, local, indigenous, scientific, religious, mystical - “something is wrong somewhere but why and how to make it right?”
4. Western technologies to address climate change – experienced as ‘foreign’ - or not practical in farmers’ realities (e.g. too expensive)
5. The educator to navigate and mediate in the nexus between different forms of knowledge



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WHAT SHOULD BE THE QUALITY CONSIDERATIONS TO INFORM M&E?

1. Effective CCE&C should be **mindful of and responsive to both the cultural and contextual differences** that influence the adoption of recommendations and the outcomes of educational processes. These differences could include societal norms, regulations, and institutional crafts that govern the adoption of new practices. Even within one culture, contextual differences may exist.
2. **A collaborative approach** to adaptation emerges as one of the sustainable ways to ensure lasting solutions - ensure that the contexts of smallholder farmers and other local stakeholders are interfaced with local and international adaptation interventions
3. **Segmented** communication – closing gaps between knowledges and the disconnect between stakeholders
4. Draw on multiple rationales/matters of concern in addition to the scientific basis for action, that acknowledge and **speak to diverse value positions.**

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WHAT SHOULD BE THE QUALITY CONSIDERATIONS TO INFORM M&E?

5. Focusses on adaptation, less so but also on mitigation (in educational institutions); but also notes limits to adaptation
6. Mediates / integrates across different knowledges viz scientific/ universal, technical, cultural, local, practical, indigenous, traditional knowledge and belief systems
7. Acknowledges the richness of existing knowledge in place and use it as the base for further research and intervention
8. Crafting a climate change curriculum based on preconceived perceptions on climate change and adjust curriculum and teacher knowledge accordingly
9. Metaphors of learning – participation in knowledge creation, acquisition of available knowledge, transformation of knowledge (how to respond to CC)
10. Is better resourced (addressing 'lacks') and monitored for impact



Join the MECCE Africa Regional Hub!
Write to LudwigChanyau@gmail.com to receive updates and invitations.

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Slides available at ELRC website www.ru.ac.za/elrc/ | Contact us |
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Climate change education and communications (CCE&C) are fundamental to increasing climate literacy and supporting climate action. However, globally we have limited understandings of what effective CCE&C would look like. There is also little clarity on what might be appropriate monitoring and evaluation frameworks to support intergovernmental processes to improve the quality and quantity of CCE&C. The Monitoring and Evaluation of Climate Change Education (MECCE) programme responds to these gaps with a research-based partnership of 80+ scholars and agencies, funded by the Social Sciences and Humanities Research Council in Canada, with over \$2 million in international partner contributions. MECCE aims to advance global climate literacy and action through more and better CCE, training, and communications. But would the same frameworks and guidelines be appropriate around the globe? As partners in the MECCE project, Rhodes University's Environmental Learning Research Centre undertook a theory-building systematic review (adapted from the methodology of Okoli, 2015) to understand the contours of CCE&C in various regions. This presentation will share the findings from Southern Africa, focusing on (1) the contexts in which CCE&C happen: subsistence and commercial farming; formal education in schools and universities; and industry and government contexts among others; (2) the methods deployed for CCE&C; and (3) the epistemological considerations which strongly emerged as an uneasily held confluence of knowledges: technical and scientific knowledge, local, practical and indigenous knowledges, and cultural-spiritual understandings of climate change related phenomena.

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