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Cultural Historical Activity Theory-related research

My research interests lie in formal and informal learning in the context of environmental sustainability and, in conducting change-oriented research with a focus on community innovations for transforming society towards a more liveable, egalitarian, and just world. Drawing from sustainability transformations thinking, my research seeks to address sustainability issues including but not limited to climate change, to improve the quality of life and the quality and relevance of education for all, especially those children living in vulnerable contexts related to poverty and environmental degradation. My use of third generation CHAT as an analytical tool stem from the belief that if learning is to bring about sustained changes to the ways people live (sustainability transformations), that learning must be radical and transformative, a concept Engeström calls *expansive learning*.

My PhD research examines learning for climate change adaptation from a socio-scientific perspective in a non-western context. The doctoral study investigated how people develop understandings about climate change as they adapt their everyday practices (typical everyday routines that members of a given community engage in on a day-to-day basis) in response to the impacts of climate change. The study then analysed what, if anything, people in this community grappling with the impacts of climate change were learning through adapting their everyday practices in response to the changing climate. Through studying climate change *in situ*, the longer-term aim of the study was

to gain insights into the design of climate change interventions. The immediate goal was to build knowledge to inform education's role in enhancing community members' resilience and reducing their vulnerability to climate change.

Below, I present a summary of how I use CHAT in my research:

Activity system as the unit of analysis in climate change adaptation

My research draws from sustainability transitions thinking which contend that addressing complex environmental issues including climate change requires radical changes to existing socio-technical systems. Climate change adaptation thus, compels humans to dislodge existing systems and adopt new ways of living, working, leisure and consumption patterns to drive society towards a more sustainable trajectory. The concept of an activity system thus provides a useful framework for analysing the sociocultural, political, and historical dimensions of everyday practices in a more holistic manner.

My use of CHAT as an analytical tool stem from the argument that while climate change could be regarded purely as a scientific phenomenon and studied using the tools, and methodologies of the physical sciences, socio-cultural researchers content that what influences adaptation is complex and cannot be construed outside the broader sociocultural context. Cognizant of these arguments, the was guided by the following ethnographic principles: studying people, objects, and interactions in their natural setting by collecting data in multiple ways, including participant observation and in-depth interviews, to develop thick descriptions of the case. This enabled learning to be examined not simply as a technology of the mind, but as what people are able to do hence, allowing observation of and access to local meanings and ways of knowing.

Additionally, third generation CHAT's concept of an activity system sets the analysis of learning beyond the individual and focus on the collective. This concept becomes a useful analytical tool in my research which draws on practice theorists who contend that consumption patterns should not be conceived entirely as consequential of individual choice. Rather, people consume things as they fulfil the performance of practices, thus, consumption is socially constructed. Consequently, apportioning blame for anthropogenic climate change entirely on individuals becomes problematic because the successful performance of a social practice rests on what has been deemed socially acceptable behaviour. Individuals tap on socially shared meanings, tools, conventions, materials, and expectations as they fulfil a practice.

A major goal of my research is to examine how the conventions of practices, in this case farming practices, enabled or impeded community members ability to adapt their farming practices as they faced climate change induced changed rainfall patterns in a community that largely depended on rainfed agriculture for a living. Climate change is posing serious threats to community member's livelihoods due to frequent crop failures. In the next section, I explain how I use the concept of expansive learning and the zone

of proximal development (ZPD) to analyse how the cultural and historical attachment to existing practices plays as significant a role as the intractability and unpredictability of the changing rainfalls in mediating community members' investment in new practices.

2. ***Expansive learning as expansion, radical and transformative and leading to adoption of more sustainable farming practices***

My use of CHAT stems from the argument that due to the complexity and intractability of climate change, the learning required to achieve radical and sustained changes to existing practices must be radical, transformative, and analysed from a systemic perspective. The concept of expansive learning (radical and transformative learning) is a critical analytical resource in my research because if the goal for adaptation is to help the farming community to adopt more sustainable farming practices, there is need to question, challenge, reflect on and transform existing social practices that have resulted in crop failures year in year out. By drawing on Third generation CHAT's formulation of the ZPD as a collective, the study was able to examine individual farmers' potential for development of new understandings. The study examined what emerges as possibilities within an individual's proximity of development, why the ZPDs differ among individuals, and how community members work together to expand each other's ZPD. Additionally, the study analysed the possibilities of transformative change in the strongly held beliefs about farming practices by the community as a collective.

3. **Division of labour, voice, and knowledge pluralism in climate change adaptation**

At the centre of my research is CHAT's concept of division of labour a concept that pits activity systems as multi-faceted and multi-voiced entities. The research community I worked with received information about climate change from several sources, including children from the local school's environmental education club, technical experts, print and screen media and role models within the farming community. It, thus became critical to examine whose voices are heard and why? At the core of this research is to examine how knowledge-power relations influence decisions on climate change adaptation.

A key element of the study involved and problematized children's learning and knowledge in building community understanding and responses to climate change. I was interested in understanding whether and how children's participation in a school environmental club influences their understandings of climate change. Do children have a voice, and can they influence adult decisions in the context of adaptations where typically the decision to adapt is tied closely to livelihoods?

Summary and next steps

The dominance of the physical sciences and western ways of knowing in influencing climate change decisions has been challenged because while climate change may be regarded as a global issue, its effects tend to be felt disproportionately. Additionally,

some of the solutions to climate change fall outside the scope of the physical sciences. In the context of my research, the decisions to adapt or not to adapt was heavily influenced by convectional practices embedded within historically held beliefs and cultural practices that could not be overturned by an individual. One of the biggest barriers to adaptation is that maize, a crop heavily vulnerable to climate change was not only regarded as food, but a form of cultural identity.

In my future research, I continue to explore knowledge-power relations and the role of other ways of knowing in building community understanding and responses to climate change. While CHAT intervention studies are generally modelled around staging a change laboratory, my research uses the analytical tools of CHAT without staging a change laboratory, and thereby produces insights into the extent to which expansive learning is possible in rural horticultural communities without external scaffolding initiatives, other than the opportunity for reflection afforded by focus group interviews and discussions.

References

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