STORYTELLING: DISCOURSE ANALYSIS FOR UNDERSTANDING COLLECTIVE PERCEPTIONS OF MEDICAL EDUCATION

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ABSTRACT

Using discourse analysis, the goal of this exploratory project was to determine what practitioners of medical education in Sub-Saharan Africa considered key achievements, within the scope of their Medical Education Partnership Initiative (MEPI) activities, after their initial two-year implementation efforts. To do so, a series of 58 video stories were analyzed from a 2012 symposium that took place in Addis Ababa, Ethiopia. Analysis of the video stories followed an ethnographic method of analysis. Through this analysis common themes emerged from the collective discourse, which unsurprisingly were tied directly to the MEPI themes themselves. The use of discourse analysis helped confirm that the project themes were very much aligned with actual practice. It also enabled a level of transparency of results across all stakeholders. This approach is therefore recommended for informing and supporting future programmatic decisions.

1. INTRODUCTION

Alongside decreasing costs related to video recording devices comes an increase in the availability of audiovisual qualitative research methods for data collection and analyses. In the past decade there have been major advancements in making qualitative research more sophisticated than traditional manual ways of coding data (Walsh, 2003; Jones, 2007). These advancements offer an opportunity to examine collective discourse in a more holistic way. For this reason, we have chosen to analyze the 58 video stories of participants who were in attendance at the 2nd Annual Medical Education Partnership Initiative (MEPI) Symposium that took place in 2012 in Addis Ababa, Ethiopia. In doing so, we aim to explore the collective perceptions in relation to the key MEPI themes of retention, capacity building, research, communities of practice, and sustainability.

2. BODY OF PAPER

MEPI's 2012 2nd Annual Symposium, *Building Partnership and Enhancing Sustainability*, was designed to bring together a network of 33 African, 17 U.S., two British and one Canadian medical schools and teaching hospitals as well as policy-makers from 13 countries and local and international partners to enhance the sustainability of the initiative's outcomes by building synergies between the medical education network and other local, national, regional and international stakeholders. Additionally, this conference focused on innovations and best practices with particular attention to capacity development, retention and regionally relevant research.

Because dialogic interaction yields co-constructed knowledge, a social constructivist approach can help explain how knowledge and perceptions of knowledge are related within a particular context. The study of dialogue, and the ways in which interactions around others as well as one's own thoughts, is incredibly complex and critical to understanding collective intelligence and knowledge transfer in that it is an "issue of language, talk and communication" focused on the "interplay of action and interpretation" (Weick et al., 2005, p. 409).

To capture this complexity and understand the themes highlighted in the symposium, we selected a grounded theory methodology. Grounded theory is a qualitative research method first conceptualized by Glaser and Strauss as a way of studying data without preconceived assumptions. Glaser and Strauss' (1967) strategies develop theory from research data instead of from existing theories. An ethnomethodological approach is one in which the world is not studied in abstract terms but rather, "on the level where reality is being performed" (Cruickshank, 2012, p. 40). Accordingly, we understand reality as a "product of our own mental constructions" as it is "constructed by people and society, as is the case in the theory of practice, symbolic interactionism, phenomenology, ethnomethodology and hermeneutics" (Cruickshank, 2012, p. 40). This approach allows the researcher the flexibility of engaging in simultaneous collection and analyses of data.

To gather information on how participants define the achievements of MEPI, we relied on interpretive inquiry through interviews and storytelling. As part of the interpretive approach, those who chose to tell their story were simply asked to share their achievements over the two-year span of MEPI efforts in their own countries. This approach allowed the perspective of the storytellers to emerge. By coding and analyzing the individual's response, we were able to assess the collective knowledge environment within the symposium and in relation to the MEPI themes. This is critical to assessing future areas for development and outcomes of a highly diverse, international deliberation—one in which communication is critically important.

To analyze the discourse in the 58 videos, we used NVivo 10, a qualitative analysis software. Though discourse analysis has its limitations, it offers a transformational opportunity as a driver for further exploration in systems of learning and knowledge transfer. The 58 video narratives, which were on average 5 minutes long, were viewed and listened to by a single researcher from the research team and coded accordingly, using the five MEPI themes (retention, capacity building, research, communities of practice, and sustainability) along an iterative timeline.

As Silver & Pataschnick (2011) illustrate, the synchronicity between transcripts and visualization of audio waveforms can help mitigate the limits of using a single source of data. Figure 1 illustrates the way in which transcripts can be viewed alongside the coding process, keeping the analysis an active process. Furthermore, the transcripts alongside coded material can help further explain the researcher's process for coding specific information.
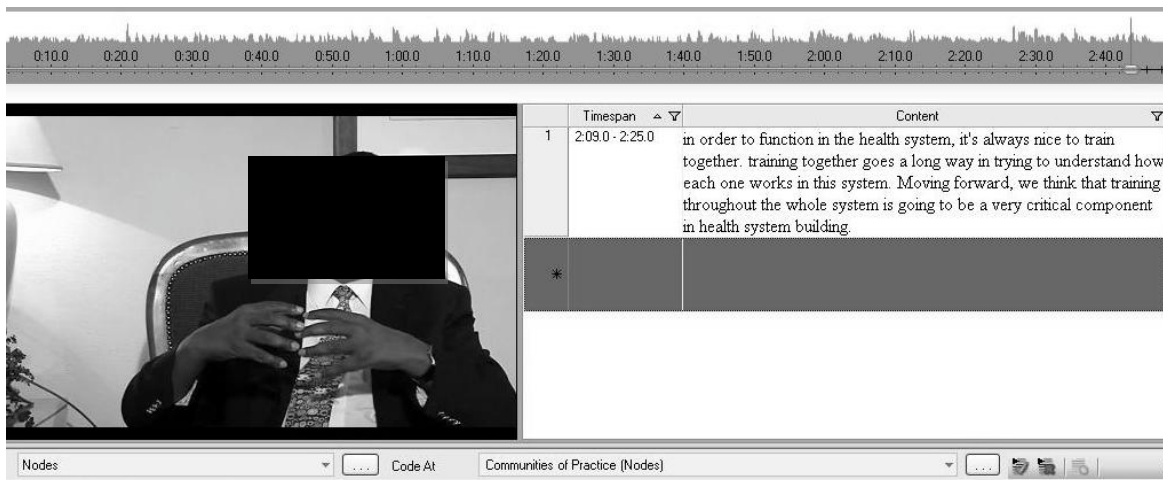

Figure 1. Screenshot of the video analysis layout in NVivo 10

We approached the research analysis by coding for the five core MEPI themes: capacity building, communities of practice, research, retention, and sustainability. Through the process of coding, a node was created when a specific mention of one of the core terms. In addition, after the initial mention of the core term, additional indicators (sub-nodes) were coded within NVivo 10 which provided a much more robust definition of the core themes. The following table (Table 1) shows the thematic nodes and indicators (sub-nodes).

Table 1. Thematic Nodes and Sub-nodes

Themes (nodes)	Sub-nodes
Retention	• Faculty • Graduates • Health Worker
Capacity Building	• Quality • Quantity
Research	• Curriculum development • Faculty Development • Grants • Research Training
Communities of Practice	• Community Engagement • Tacit Knowledge • Curriculum Development • Increasing Diversity • Rural Training • Situated Learning
Sustainability	• Collaboration • ICT • Partnership • Scalability • Standards

2.1 Findings and Discussion

The analysis of the discourse resulted in a few additional key themes that emerged from the data. These were e-Learning and Medical Education. The five core themes as defined by not only the MEPI program but many of the principal investigators were 'communities of practice', 'retention', 'capacity building', 'research', and 'sustainability.' Working with these stories led to greater depth of understanding in how these core themes are illustrated in practice (see Table 1). Additionally, a few other themes emerged from the data such as an emphasis on e-Learning, which was not initially cited as a core theme but rather spans across the themes. Medical Education was also coded as a general overarching theme. The sub-nodes for e-Learning included ICTs, and Monitoring and Evaluation. The Medical Education sub-nodes were Formal Education, and Specialist Training.

Capacity building and research were the themes that had the most specific references. A word frequency query showed that the term 'research' was mentioned 48 times in the transcribed data. However, the most commonly coded themes, or nodes, were 'retention' with 37 references in 20 sources, 'capacity building' with 38 references in 23 sources, and 'communities of practice' with 33 references in 23 sources. Within 'communities of practices' terms coded as indicators were 'community engagement', 'curriculum development', increasing diversity', 'rural training' and 'situated learning.' Among these, 'rural training' with 25 references and 'community engagement' with 20 references were most common. For retention, separate indicators were mentioned on the retention of faculty, graduates, and health workers. For 'capacity building' there were more references to quality (39) than quantity (25). This discrepancy alerted us to explore why this might be; it became clear that capacity building in terms of quality was precipitated by an increase in quantity of students, which explains an increased occurrence of references to quality over quantity.

For sustainability—the most difficult term to define—we had to explore outside sources as the specific term was not mentioned frequently enough to build a definition. Etymologically, the word is derived from Latin *sustinere,* which means 'to hold up.' The most common definitions found for the word are 'maintaining' and 'enduring'. Historically, the term has primarily been used to refer to human-environment relations and sustainable economic development (Ratner, 2004); however, in the context of this research, the term was used to refer to making educational interventions sustainable and enduring. We found that the best way to code the term was with its more general definition as 'something that endures.' When we ran a text query on 'endure' and words similar to endure, the most common result was 'capacity.' This suggests that capacity building and sustainability are two themes that are closely related and overlap. In determining sustainability indicators (sub-nodes), we primarily looked for mentions of scalability and implementation of

information and communication technologies. Given the ambiguity of the term, coding in this area was the most organic and open-ended. We found that the most commonly noted factors in sustainability were information and communication technologies (ICTs) and partnerships both with 18 references. This mostly included telemedicine and e-learning initiatives so often the codes were also found under ICTs in the 'elearning' node. Other themes related to sustainability were collaboration, patient care, which coincided with communities of practice, scalability, and standards.

The research theme was coded for 'research training' and 'curriculum development'. Under research training we also included training for responsible research methods. It became clear that there are overlaps between responsible research methodologies and the retention of faculty. A possible explanation for this is that by providing faculty avenues for publication in world-class journals, faculty are incentivized to remain in their respective fields and locations. This is especially true considering an increased emphasis on rural training and retention of faculty and graduates in rural areas. The analysis showed that a focus on rural training and communities of practice have led to greater rates of retention of faculty in rural areas where medical support is critical.

3. CONCLUSION

In addition to functioning as a digital repository for individual accounts, the 58 MEPI videos illustrate a collective intelligence that is distinct. By coding and analyzing each story, we were able to determine the major themes as well as identify areas in need of greater clarity. This research informed a need for better methods of understanding individuals within diverse, deliberative groups, particularly in the area of international partnerships for medical education. This is especially important when considering curriculum development, student retention, and capacity building.

As the purpose of an international symposium is to collaborate with a diversity of participants, communication and transmission of knowledge is critical to the success of the event itself and its aftermath. In the future, it would be informative to compare the number of codes from video analyses with tags from the initiative's website (http://mepinetwork.org). In this way, one could observe the gaps between organizational understanding and actual implementation of individual efforts. In addition, this type of research makes collective intelligence more transparent and enables a continuing dialogue of key issues that emerge from the analysis. As a result, such analysis supports knowledge transfer and has the potential to support better future decisions of stakeholders.

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