C. Zielinski. Community Note. 2020.
Knowledge management and the corona pandemic: an online discussion.
Knowledge Management for Development Journal 15(2): 173-183.
km4djournal.org/

COMMUNITY NOTE

Knowledge management and the coronavirus pandemic: an online discussion

Chris Zielinski

Between 30 March and mid-June 2020, the Knowledge Management for Development (KM4Dev) listserv was host to an online discussion on knowledge management (KM) and coronavirus, moderated by Chris Zielinski. Over 30 participants submitted some 80 contributions to the discussion. A Knowledge Café was held on 14 May 2020 in which the topic was further discussed (https://vimeo.com/420811042). The present paper seeks to organize this rich material thematically and summarize the discussions. KM4Dev wiki contains the complete set of emails received (wiki.km4dev.org/Talk:KM_and_Coronavirus). The principal contributors to the discussion are named here, and the full list of discussants is given in the acknowledgements.

Keywords: online discussions; knowledge management; coronavirus; infodemics; pandemics; information; misinformation; KM4Dev

Introduction

Between 30 March and mid-May 2020, the Knowledge Management for Development (KM4Dev) listserv was host to an online discussion on knowledge management (KM) and the coronavirus, moderated by Chris Zielinski. Over 30 participants submitted some 80 contributions to the discussion. The present paper summarizes this discussion thematically.

The infodemic at the heart of the pandemic

The COVID-19 pandemic has been accompanied by what WHO's Director-General has termed an 'infodemic' – an over-abundance of information (some accurate and some not) – that makes it hard for people to find trustworthy sources and reliable guidance when they need it (Adhanom Ghebreyesus, 2020). The focus on information and misinformation is striking, as this has always been a relatively ignored and unfunded component of the international development effort. Some of the problems in this area – notably the scarcity of indicators, the

relative lack of research in methods for disseminating good information and countering bad information – are very much current concerns with COVID-19.

Impact of COVID-19 on sectors

Clearly, the pandemic has put enormous strains on the public health systems around the world, and it has raised questions about its potential impact on food supply, food demand as well as on the global economy as a whole. The distinctively different local contexts mean that each country in the world has since been challenged to come up with both national and international responses to the knowledge management of the crisis. "National", since each country had its own institutionalized reporting system and knowledge management infrastructure, and its own duty, whether legal or purely ethical, to keep its citizens informed. And "international", in response to a globalized knowledge management system based on pre-existing accords in such bodies as the World Health Assembly.

The cross-linking of international centres of knowledge excellence appears to be a new form of trans-sectoral knowledge management. Atsu Sename noted that, in Africa, COVID-19 impacts the start-up economy. Faced with this crisis situation, he asked what strategies could knowledge management (KM) offer in supporting small start-ups in Africa? Larry Hiner felt that the enforced slow down of work provided an opportunity to collect success case studies, which, with proper curation, could help the start-ups fare better when the pandemic passes. Nancy White stated that some sectors are now running at a frantic pace while others have been obliged to pause. For example, front line workers in health care, education, transportation are working long hours, often at high personal risk. In some countries, small businesses have not received the same kind of government support as large corporates. Unemployed staff don't have any social safety net or health benefits when pay stops.

John Hoven stressed that KM can help with strategies that support exploratory search and connecting across disciplines. People (notably expert professionals) tend to rely on trusted sources, but this strategy can insulate them from new knowledge. While modern corporations actively search for people who "look outside the box", this is rarely seen in government and social organizations.

How can new knowledge be managed?

John Hoven offered a typology of the knowledge landscape presented by COVID-19. This included: 1) rapidly emerging information, 2) distinctively different local contexts, 3) fast real-time iteration between data collection, storage, distribution, action, impact, and analysis. He termed this Rapid Knowledge Management (RKM), or New Knowledge Management

(NKM – in the sense of "the management of new knowledge", rather than "a new kind of knowledge management"). There are already emerging models for this (Boyes, 2019). He offered some principles for KM in the face of imminent disaster: 1) the need to take bold action (in COVID, focusing on dense urban areas, nursing homes for the elderly, meatpacking plants, etc.); 2) the urgency to learn, even when we are ignorant of the exact nature of the threat; and 3) the need to act flexibly as we learn (e.g., in rapid prototyping, learning by doing, qualitative theory building, etc.).

John Hoven felt that the rapid iteration between data collection and analysis (e.g., rapid prototyping, qualitative theory building) generated new knowledge. While much of the "knowledge" gathered during this exploratory process has little or no lasting value, it nevertheless helps to discover knowledge that does have lasting value. New Knowledge Management covers more than simply the storage and sharing of recently discovered knowledge. It includes managing transitory knowledge during the exploratory process, and indeed managing the exploratory process.

A basic question was, why is KM for COVID-19 different from the application of KM in other fields? An answer was that it was not necessarily different – it was a case of trying to understand how best to adapt KM concepts, methods and tools to support COVID-19 management. Do we just need to do KM better and faster, adapting to new situations what we already know how to do? Do we need to learn how to make a stronger case for KM and learning in a crisis? Do we need to demonstrate the value of KM approaches and tools in helping communities, governments and organizations to learn and adapt rapidly. Do we need to get better at coming up with solutions and acting very quickly?

COVID-19 was pushing us to learn and act at a pace much faster than academic research, and often to do so while actions and outcomes were still interacting. While organizations such as institutions may not have the capacity to learn, the individuals within those institutions can learn, although they may struggle to absorb and institutionalize their lessons. Peter J. Bury suggested that managing knowledge rapidly risks leading to the management of 'knowledge' that has little or no lasting value, and noted that there was a world-wide trend of people in power using the pandemic situation and related fears to grab even more power.

Dealing with multiple narratives

Bruce Boyes noted that the uncertainty and ambiguity caused by the new and unexpected leads to the need to consider multiple narratives, each of them potentially valid. Three of these reactions to the virus outbreak were characterised by Nick Chater in *Nature* as 'a storm in a teacup', 'a house on fire', and 'holding back the tide' (Chater, 2020). There was a massive effort in different countries to manage knowledge at the beginning of this epidemic – mainly to suppress or dismiss it as inconsequential ('storm in a teacup'). Then, as the scale of the

problem grew uncontrollably, control measures were imposed – either radical ('house on fire') or mitigating ('holding back the tide'). The ability to manage knowledge about the pandemic also became uncontrollable. The alternative narratives highlights the importance of 'multiple knowledges and multi-stakeholder processes in the solution of 'wicked problems' (Cummings et al, 2019).

New knowledge, wisdom and trust

Managing the acquisition of new knowledge may be more important in KM than codifying and storing. This crisis poses a challenge for knowledge brokers. COVID-19 is leading to the production of massive amounts of knowledge – some of which is valuable and helpful, much of which is repetitive, speculative and perhaps even adding to the confusion. Knowledge brokers seek to bring together different perspectives and sectors; to synthesise complex and voluminous knowledge into something that is accessible and usable; and to create some order and sense. What is important is to produce a synthesis: not just culling and selecting, but identifying trends and generating new insights in a responsive and timely manner. Currently, the big challenge for knowledge management is not so much the knowledge, but (a) the management and (b) the demand for knowledge. We need to think how to strengthen processes of collective impact, positive (centralised and decentralised) leadership, joint planning, joint capacities, networking, transparent communication, systems of incentives and mutual accountability.

Sebastian Hoffmann pointed out that the wealth of data and visualization do not necessarily help in complex decision making: it can have the opposite effect, even though the knowledge provided is essentially important. While we may be good at managing declarative knowledge (know-what) and procedural knowledge (know-how), this was not always the case with reasoning knowledge (know-why), supported by new data analytics technologies. Ideally, reasoning knowledge should help to create decisions supporting wisdom on top of knowledge. During this crisis, figures have been correlated and interpreted by violating basic rules in statistics and science. Reasoning knowledge has not generated adequate wisdom. He suggested that 'human wisdom' is a separate knowledge management issue in a pandemic like coronavirus because of the complexity of the multidisciplinary subject and the tremendous scope of consequences for society. Stephen Bounds felt this wasn't a problem of 'wisdom' (which he defined as 'the ability to correctly spot weak patterns from past experience'), but rather the existence or absence of decision-making frameworks at an organizational and supra-organizational level.

There was also a problem of a lack of trust in institutions. In this context, Yacine Khelladi reported on cases in two Caribbean countries where, as a result of very low trust in the ability of local authorities to manage the crisis, and poorly prepared and inefficient health systems, violence broke out against suspected COVID-19 carriers.

Ethical use of data

In discussing contact-tracing and other apps that had implications for privacy, Denise Senmartin asked how to deal with privacy and personal data when developing technical solutions for helping people and governments deal with the pandemic? Veronique Sikora questioned the purpose of designing such an app. She stressed the need to care for one another and to build community. There are countries where the government is working for the people and using data in a responsible way.

An app could help but it could also be a way of tracking people, and it could lead to scaremongering. Some felt that privacy is at risk: 'No-one, no government, will be able to warrant that collected IP addresses of mobile phones will be completely erased once the pandemic is over. And so this very private information could be misused in the future' (Peter J. Bury).

Proportionality and optimal timing

Charles Dhewa raised a concern about the proportionality and optimal timing of the drastic public health responses to COVID-19 being implemented by countries far away from the epicentres. It is hard to act radically when the threat appears to be far away. There is a Shona idiom which says *Haupisi imba nokuti yapinda nyoka* meaning 'You don't burn your house merely because a snake has entered the house.' In other words, your reaction should be in proportion to the challenge. Afrocentric knowledge brokering combining traditional wisdom with subject matter expertise is one skill lacking in our policy arena. 'Burning down the house on suspicion that there might be a snake inside. And as the house goes up in smoke you see the snake hiding in the fowl run.' Michael Hill put this Shona wisdom into a contemporary Americana perspective: 'Because New York City is a mess, you want us to shut down Montana and Wyoming, where there has been almost no deaths, few cases, and the hospitals are almost empty?'

Other issues

Euphresia Luseka, a water, sanitiation and hygiene (WASH) specialist, expressed the view that, in webinars on the COVID-19 pandemic whose titles explicitly reference Africa, it was generally true that all the conveners and presenters were from and in Europe. There are often no women on the panels. As KM practitioners are often the ones who prepare such webinars, she urged the KM4Dev community to ensure that webinar panellists are balanced in terms of region, gender and age (youth) representation.

Chris Zielinski posted a short list of knowledge management issues in coronavirus which was subsequently expanded by other contributors. The consolidated list is given in Annex 1. Wycliffe Omanya noted the basic KM problems of deciding what to do first, in the short term and medium term? How do you decide what needs to be postponed? How do you select what goes virtual? How do we learn and adapt? He provided an Activity Priority Model for COVID-19 (see Annex 2).

What we are learning from our digital solitudes

Francois Stepman provided an eloquent overview of the digital solitude in which many of us found or still find ourselves, which is given below, in full:

> We can congratulate ourselves on the fact that the overabundant connectivity of our solitudes virtually maintains, during this period of abstention, the vital links that must continue between us. In reality, part of us is surprisingly prepared for this sudden confinement.
>
> Each of us receives and emits bursts of texts and videos intended to raise a united front of virtual solidarity. Uninterrupted transmission of small thoughts, funny stories, spiritual drawings, expressions of friendship. Endless spiral of shared 'emoji' emotions. In this paradoxical 'shared isolation' of 'rediscovered proximity' how not to feel overwhelmed by the communication in loops, saturating the waves, and whose virality undoubtedly intends to compete with that of the real virus. We order in two clicks, we are answered within 24 hours. Food, books, beauty products ... Everything we want is delivered to our doors by masked servants, individuals without names or faces, who have retained the right to move, since they provide our service.
>
> Our new virtual world has suddenly taken a scale - whose impact we have not yet measured. This period of torrential communication, compulsive shopping, voracious idleness, naturally provides a gold mine for profiling algorithms. This was already the case before the epidemic, you may say. Yes, but we were not forced by necessity to expose all of our behaviour and our exchanges online. We were aware of the convenience of electronic communication and e-commerce. We used to see in the power of our electrical equipment, a technological victory over space, over distance. But now, we face a forced and unwanted removal. We had not yet estimated the value of this victory in terms of safety. The development and rolling out of corona virus apps bring us closer and faster to what Harari calls 'the world of data-ism'. However, after this exceptional period, virtual links, which will have temporarily saved our human solidarity, should not dominate the future.

Acknowledgements

Thanks are due to all participants in the discussion (in alphabetical order): Stephen Bounds, Bruce Boyes, Peter Jurg Bury, Paul Corney, Sarah Cummings, Charles Dhewa, Jim Delaney, Helen Gillman, Yannicke Goris, Sue Griffey, Srividya Harish, Michael Hill, Larry Hiner, Sebastian Hoffman, John Hoven, Suzanne Kawanuka, Yacine Khelladi, Patrick Lambe, Euphresia Luseka, Jack Merklein, Wycliffe Omanya, Carlos Rodriguez, Rocio Sanz, Atsu Sename, Atsu Sename, Denise Senmartin, Véronique Sikora, Francois Stepman, Kristin Strohhecker, Jorge Chavez-Tafur, Nancy White, and Chris Zielinski

About the author

Chris Zielinski has held senior positions at the World Health Organization and other UN organizations for over 20 years, in Vienna, Geneva, Rome, Egypt, India, Zimbabwe and the Congo. He has also been CEO of the UK Authors Licensing and Collecting Society, Chris is currently a Visiting Fellow at the University of Winchester (UK), and is working on AI, knowledge management theory and indicators for measuring the impact of information.
Email: chris@chriszielinski.com

References

Adhanom Ghebreyesus, T. 2020 quoted in Zarocostas, J., How to fight an infodemic, The Lancet World Report, 395 (10225), p 676, February 29, 2020 DOI: https://doi.org/10.1016/S0140-6736(20)30461-X

Boyes, 2019. Active knowledge exchange with users and partners in open innovation: the case study of Xiaomi. Real KM, 21 June 2019 (https://realkm.com/2019/06/21/active-knowledge-exchange-with-users-and-partners-in-open-innovation-the-case-study-of-xiaomi/ accessed 1 October 2020)

Chater, N. 2020. Facing up to the uncertainties of COVID-19. Nat Hum Behav 4, 439 (2020). https://doi.org/10.1038/s41562-020-0865-2 accessed 1 October 2020)

Cummings, S., Suzanne Kiwanuka, Helen Gillman, Barbara Regeer. 2019. The future of knowledge brokering: perspectives from a generational framework of knowledge management for international development. Information Development Vol 35, Issue 5 https://doi.org/10.1177/0266666918800174

Some ideas from KM4dev

Participants offered a range of ideas on KM and coronavirus:

1. Identify and share best practices and document what is not working well and why, so that we can be ready to improve and support in the future;
2. Identify how KM can better serve organisations, staff and communities. Specifically, how to support staff to ensure they: 1) don´t feel isolated, 2) get the information they need for their work; 3) know whom to reach for specific information. (Rocio Sanz)
3. Virtual cafés (informal spaces where those who feel isolated can engage with others in "virtual cafes". Have virtual sessions where the team checks in for 10 minutes, while holding up coffee cups, etc to the camera. (Rocio Sanz and Mike Hill)
4. Ensure there is a place where all critical information can be stored and accessed. (Rocio Sanz). To develop, or contribute to an existing, curated wiki that provides overview, access and possibility to use reliable coronavirus related information and knowledge. This could be done in close cooperation with other like-minded communities. (Peter J. Bury). Pre-COVID-19 case studies may not be of use: 'Curating a past that may no longer exist isn't devoid of lessons, but I'd be cautious about relying on them in the new future in front of us.' (Nancy White)
5. To build up a global network of partners who commit to providing a bridge between the digital and non-digital worlds for the sharing and collection of information and knowledge locally and internationally. (Peter J. Bury)
6. A blog to address misinformation about COVID-19 (Suzanne Kiwanuka).
7. A brief about how epidemics or in this case pandemics behave and what influences the behaviour of an epidemic curve (Suzanne Kiwanuka).
8. COVID-19 communication tools and methodologies could be made user friendly for the disabled, including the increased provision of a sign language interpreter and written communication tools in braille (Euphresia Luseka).
9. In general, the 'non-privileged' need to be invited to speak or be heard at relevant webinars and other online events, while recognizing that relevant global knowledge on development is not only produced in industrialised countries (Jim Delaney).

Annex 1: A KM preparedness strategy for knowledge management for epidemics/pandemics

Chris Zielinski

1. KNOWLEDGE MANAGEMENT OF DATA

1.1. As soon as a threat of a national epidemic or global pandemic is evident, a data management strategy should immediately be developed and publicly announced
1.2. All data relating to the emergency should be explicitly defined – what data are and are not being collected.
1.3. Data reporting should be in the hands of independent national or international bodies not subject to political control.

2. KNOWLEDGE MANAGEMENT OF COMMUNICATION

2.1. A single authoritative source for all information regarding the threat should be established and regularly maintained. This source should provide or relay:
  2.1.1. The data described in section 1
  2.1.2. Impartial guidance on healthy behaviour to be adopted by citizens
  2.1.3. Guidance on protective measures for all parties (citizens old and young, health carers in hospitals and private institutions, police and others employed in specific public functions, public-facing commerce, businesses, sport, public gatherings, etc.)
  2.1.4. Guidance on medicines and other pharmaceuticals and their conditions of use
  2.1.5. A constantly updated corrective communication effort on mis-/disinformation/fake news and rumours
  2.1.6. Legal recourse against dangerous falsehood based on laws against public incitement to violence, hate speech, Holocaust denial, etc. Such laws should not prevent free speech, or the uncovering of malfeasance, or any of the other work in defence of citizen's rights carried out by the Third Estate.

3. GOVERNANCE OF KNOWLEDGE

3.1. National Chief Science/Medical Officers should be appointed by independent and authoritative scientific/medical bodies and should not in any way be dependent – financially (whether personally or institutionally), or for their employment – on the will of political leaders
3.2. Appointment of a single crisis coordinator

4. KNOWLEDGE MANAGEMENT SYSTEMS

4.1. Establish a KM pandemic emergency strategy, including:
  4.1.1. A listing of all available information sources and mechanisms
  4.1.2. A strategy for connecting across disciplines
  4.1.3. A purposeful search for "unknown unknowns" (rapidly emerging information, unexpected changes in knowledge, social behaviour, testing, and remedies)
  4.1.4. Dynamic databases for rapidly evolving data

4.1.5. GIS for nongeographic data

4.2. Equipment:

4.2.1. Maintain an accurate stock-taking of the amount and location of all equipment required to combat a national epidemic (including personal protection equipment for the general public and for health carers, medical equipment)

4.2.2. Maintain an up to date list of manufacturers of such equipment, including their potential capacities.

4.3. Scheduling:

4.3.1. Establish a clear timetable: what should be done by whom, and by when

4.4. Research:

4.4.1. Into personal protective equipment

4.4.2. Into needed skills

4.4.3. Into economics: effects on citizens, employers, economy at large. How much will it cost?

Annex 2: An activity priority model for COVID-19

Wycliffe Omanya