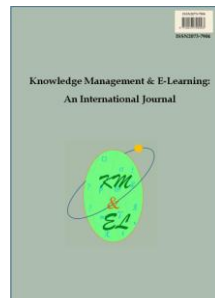

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Evolution of Facebook groups: Informal e-learning among medical laboratory scientists in Nigeria

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Evolution of Facebook groups: Informal e-learning among medical laboratory scientists in Nigeria

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Abstract: Most people think of online courses when they talk about e-learning, but aspects of social media can also be considered e-learning. In 2011 the Knowledge for Health Project (K4Health) began work with local partners to implement an e-learning and professional development policy for Medical Laboratory Scientists based on the needs identified by United States Agency for International Development (USAID)/Nigeria. Six e-learning courses were developed and promoted through several channels including social media. A Facebook Group was created to share information about accessing and navigating the courses and attracted 8,500 members in 18 months. As the Group grew, the topics discussed evolved to include trade union news, employment opportunities and technical resources. Another Facebook Group provided insights that Facebook Groups could be used to facilitate interactions focused on continuing professional development. The findings show that Facebook Groups accommodate an informal learning style, allowing individuals to learn through peer support in flexible ways. It has also shown that the use of Facebook Groups is associated with high levels of engagement with e-learning courses.

Keywords: Social media; Facebook; Social network analysis; Informal learning; Peer-to-peer learning; Continuing professional development; Communities of practice

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Rebecca Shore is the K4Health Project Manager of online communications and provides technical assistance to the field portfolio. With over ten years of experience working with public health programs, she has worked on a range of public health issues, with a focus on HIV/AIDS prevention, family planning, and reproductive health issues. In 2012 she founded the Social Media for Global Health working group for global health and development professionals using social media, which she currently co-chairs. She has a Master of Public Health with a concentration in Community Health and Prevention from Drexel University School of Public Health.

1. Introduction

When people think of e-learning they usually think of online courses. With the rise of Massive Open Online Course (MOOC) platforms like Coursera, edX and the United States Agency for International Development's (USAID) Global Health eLearning Center (GHeL), this is not surprising. e-Learning allows people from any location to access information and learn about new technical guidance and program implementation. e-Learning includes Web and computer-based learning as well as virtual classrooms for discussion and collaboration (K4Health, 2014).

As the manager of GHeL and implementer of field-based e-learning projects in Bangladesh¹, Nigeria², and Southern Africa³, the Knowledge for Health (K4Health) Project has broad experience utilizing e-learning for capacity building. K4Health also developed online toolkits, databases, and mobile apps, all of which fall under the broad definition of e-learning: any electronic means of delivering learning (Mwaikambo, Avila, Mazursky, & Nallathambi, 2012). Social media, defined as news that is disseminated through social interaction and created using highly accessible and scalable publishing techniques also falls under this broad definition of e-learning (De Villiers, 2010; University Marketing and Communications, Clark University, n.d.).

2. This is the story of a Facebook group

In 2011, a partnership was established between K4Health, the Medical Laboratory Science Council of Nigeria (MLSCN), and the Association of Medical Laboratory Scientists of Nigeria (AMLSN) with funding and technical support from United States

¹ <https://www.k4health.org/projects/bangladesh>

² <https://www.k4health.org/projects/nigeria>

³ <https://www.k4health.org/projects/southern-africa-region>

Agency for International Development/Nigeria. The K4Health/Nigeria Continuing Professional Development (CPD) Project provides Medical Laboratory Scientists (MLS) in Nigeria with CPD opportunities to improve knowledge, update skills, and acquire new proficiencies. The Project revised and re-launched a policy to guide the CPD efforts and developed Nigerian-authored and accredited e-learning courses (Mwaikambo, Ohkubo, & Cassaniti, 2013). In the first year of the project, four courses were published that focused on recent developments in medical laboratory practice, especially diagnosis of HIV/AIDS, Tuberculosis (TB) and malaria.

To promote the courses and share information about how to access and navigate them, AMLSN suggested creation of a Facebook Group. Many AMLSN's members use Facebook as a resource for professional growth and networking and are members of many Groups. K4Health established the AMLSN eLearning Facebook Group¹ in February 2013 and invited six of AMLSN's national leaders to join. These leaders were asked to invite their MLS Facebook Friends to the Group.

Founded in 2004, Facebook's mission is to give people the power to share and make the world more open and connected. People use Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them (Facebook, 2008).

Within three months, the Group had over 2,500 members and hundreds of posts. The majority of the posts were questions about course registration, the final exam, or retrieving certificates of completion. As the administrator of the learning management system that housed the e-learning courses and the Facebook Group, questions were usually directed to K4Health and K4Health usually responded.

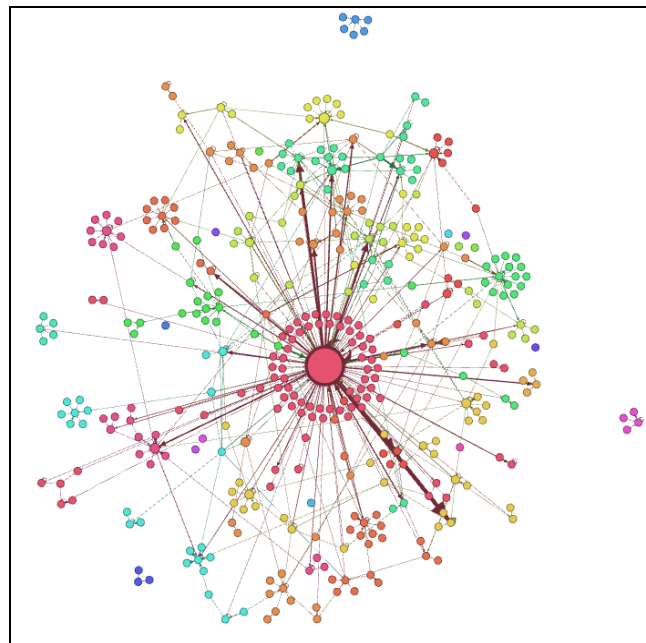


Fig. 1. Social Network Map 1 of AMLSN eLearning Group (Dec 2013)

¹ <http://www.facebook.com/groups/AMLSNeLearning>

Research by Lewis, Kaufman, Gonzalez, Wimmer, and Christakis (2008) shows that social media sites can serve as means of data collection and analysis. Through the use of free third party software, Netvizz and Gephi, K4Health developed Social Networking Map 1 (see Fig. 1), in which K4Health is at the centre of the network. Fig. 1 shows the most recent 200 interactions in the AMLSN e-Learning Group in December 2013 when the Group had 6,025 members.



Fig. 2. Facebook Interaction 1 from AMLSN eLearning Group (December 2012)

By June 2013, there were over 3,800 members and while K4Health still responded to most posts, other Group members contributed more frequently. In December 2013, three months after the release of two additional courses, the Facebook Group had over 6,000 members. At this point the Group dynamics began to change more dramatically. The topics of posts broadened to include CPD opportunities, AMLSN news, labor relations, employment and technical resources, as reflected in the Facebook interaction shown in Fig. 2.

As questions related to accessing and navigating e-learning courses declined, K4Health took a smaller role and let the community discussions evolve naturally. Topics relating to technical and scientific knowledge were concentrated in three main areas: microbiology, haematology, and genetics (see Table 1).

Table 1

Posts relating to technical and scientific knowledge in AMLSN (March 1 – May 31, 2014)

Medical laboratory science Topics	Number of posts
Microbiology	11
Haematology	4
Genetics	4

When job aids or support resources were shared, 13 months after the Groups creation, K4Health supported the sharing through a comment or a like, as reflected in the Facebook interaction shown in Fig. 3.

Facebook Interaction

**Fig.3.** Facebook Interaction 2 from AMLSN eLearning Group (March 2014)

By April 2014, the Group's membership (7,800), surpassed the number of e-learners (7,300) who earned more than 13,600 certificates of completion from the six e-learning courses (see Fig. 4).

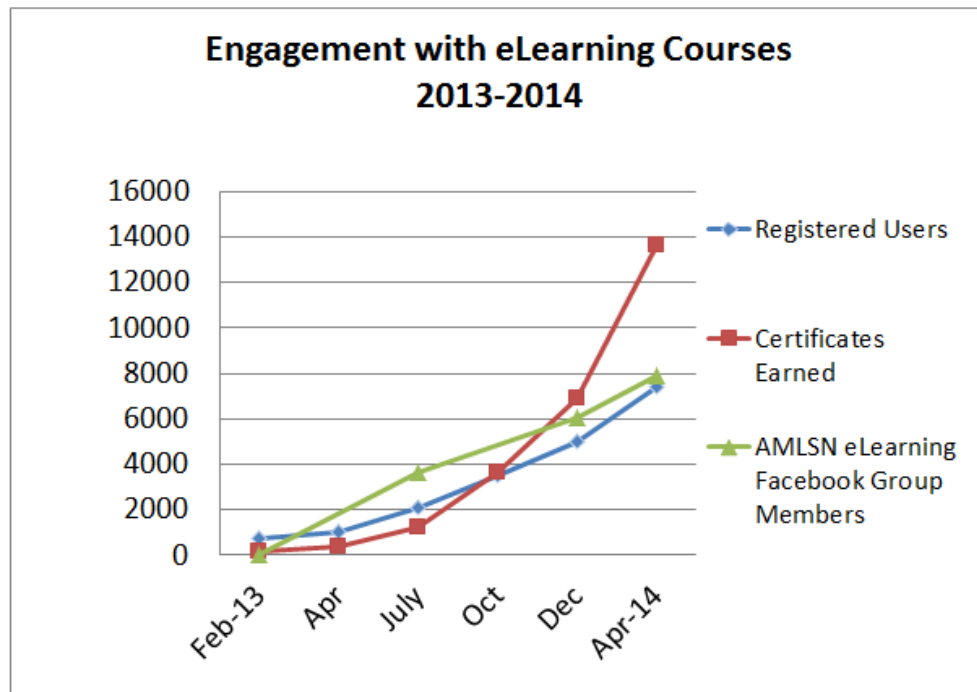


Fig.4. Engagement with AMLSN e-learning courses

Moving forward, the administration of the AMLSN eLearning Facebook Group will be turned over to AMLSN to manage before the end of the project in September 2015. To this end, five AMLSN eLearning Group members who have shown exemplary facilitation skills in responding to other member's posts will be asked to take a formal leadership role. Even with this planned handover, it is hoped that the Group will continue to evolve to be less centralized.

K4Health expects that the AMLSN eLearning Facebook Group can be used to supplement the technical information in future AMLSN authored e-learning courses through specific discussion threads and Q&A with course authors.

Map 2 (see Fig. 5) shows the AMLSN eLearning Group in August 2014. It represents the most recent 200 interactions in the group of 8,531 members. The K4Health administrator is represented by the large red circle in the bottom left.

The map shows many epicentres, although the K4Health Administrator remains the largest node. The diffuse nature of interactions is due to the many topics that are being discussed and the corresponding degree of member interest. The authors do not attribute the change seen from Map 1 to Map 2 to an increase in posts that could improve member knowledge, update their skills or allow them to develop new proficiencies. In this case, social networking analysis limited insights into e-learning because it is impossible to disaggregate the interactions by topic using the available software.

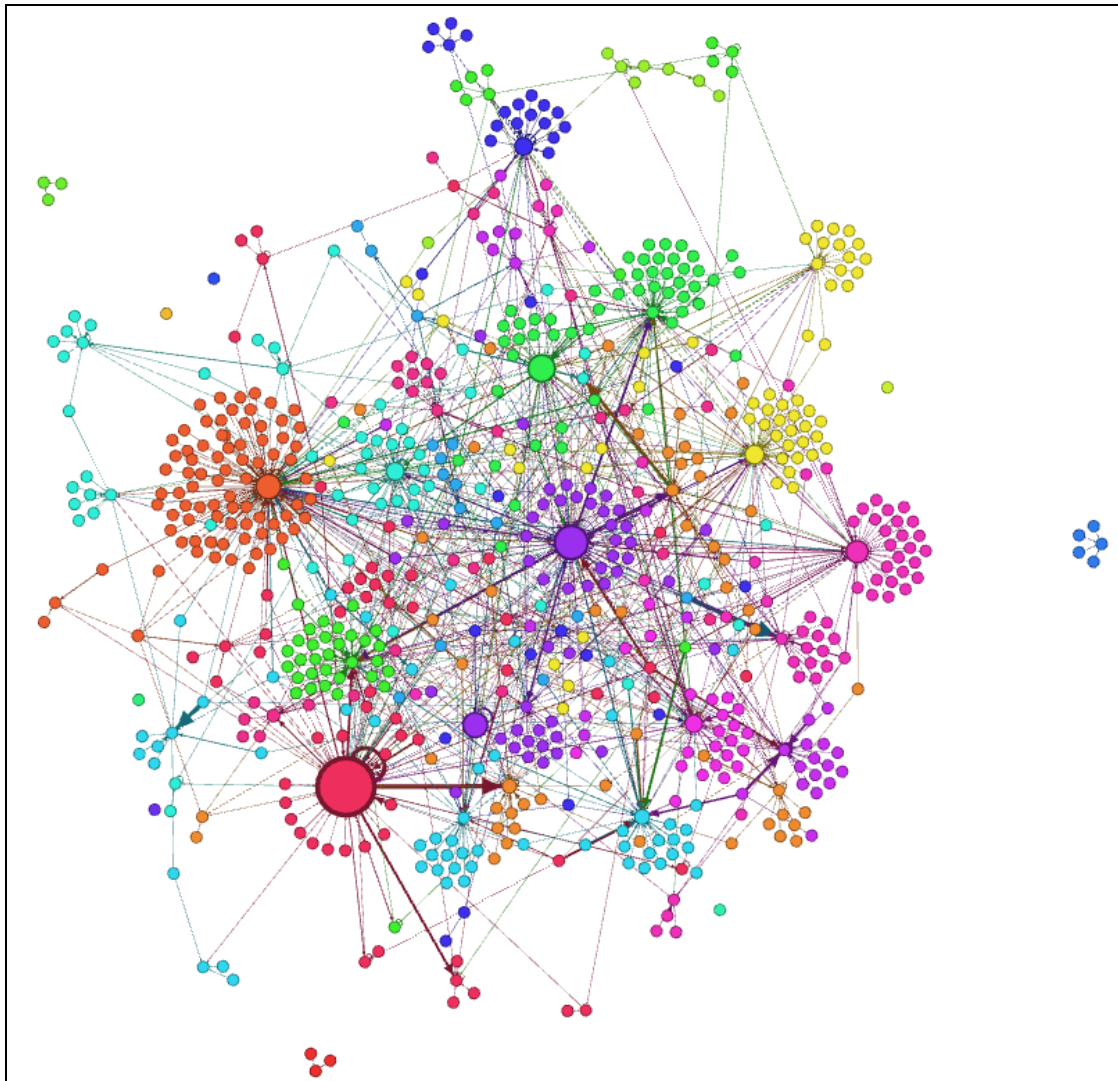


Fig. 5. Social Network Map 2 from AMLSN eLearning Group (August 2014)

3. Social media as e-learning

In response to AMLSN eLearning Facebook Group's success, a member of the AMLSN leadership sought help in fostering the development of an independent Facebook Group focused on haematology that he founded. The Haematology Research Forum Group¹ has a global audience and was *not* developed to promote e-learning courses as the AMLSN eLearning Group was. As reflected in a social network analysis map shown in Fig. 6, this Group is highly decentralized, a hallmark of high levels of knowledge exchange.

¹ <http://www.facebook.com/groups/HaematologyResearchForum>

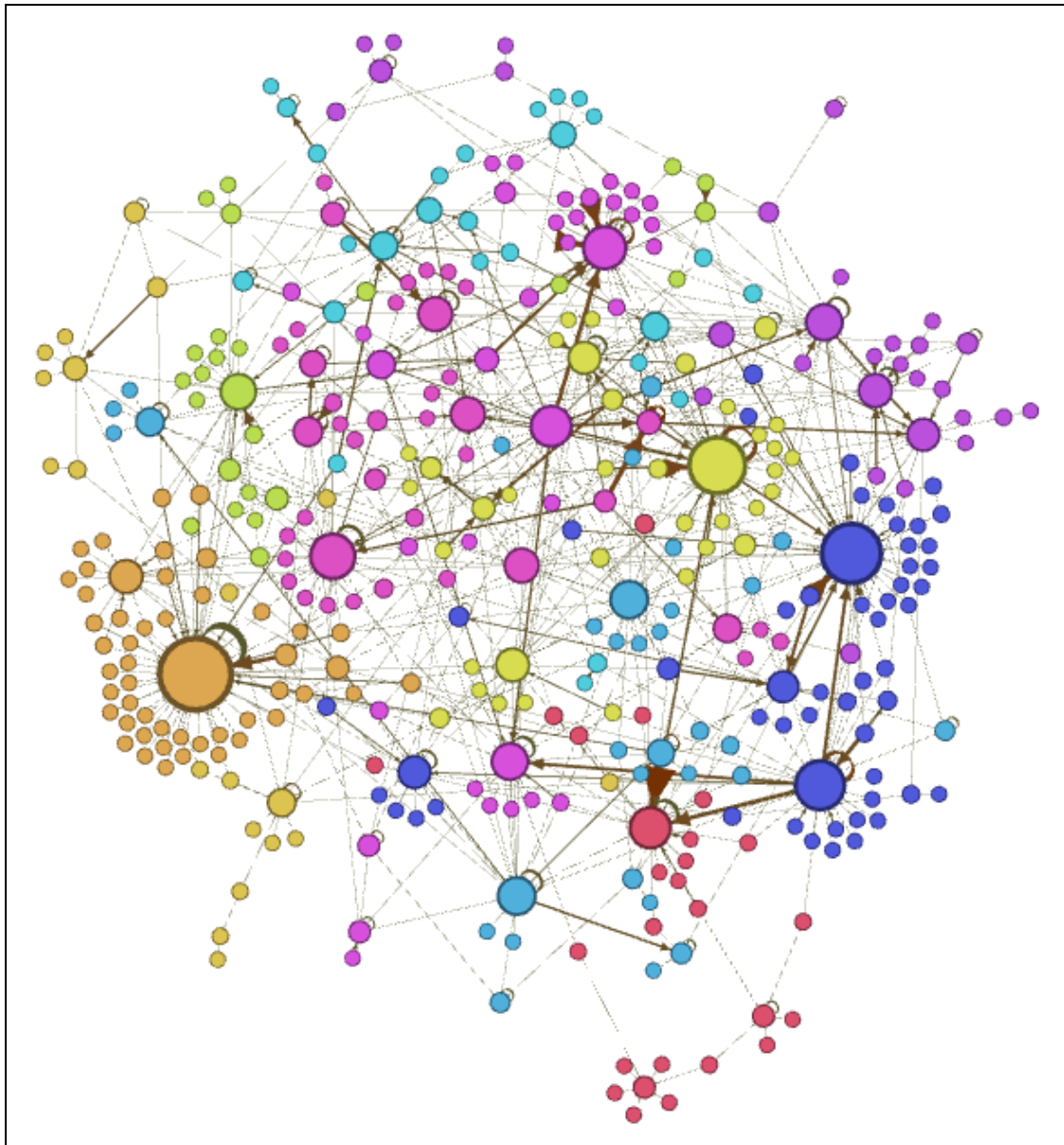


Fig. 6. Social Network Map of Haematology Research Forum Group

In Table 2, the top three keywords mentioned in posts in the Haematology Research Forum Group during a three month period were HB/Hemoglobin, RBC/Red Blood Cells, and Stain.

Table 2

Posts relating to technical and scientific knowledge in Haematology Research Forum Group (March 1 – May 31, 2014)

Haematology key words	Number of mentions
HB / Hemoglobin	77
RBC / Red Blood Cells	67
Stain	48
Blood Group	43
PCV / Packed cell volume	28
Platelet	27
WBC / White blood cell count	31
Sickle cell / Anemia	23
Anticoagulants / coagulants	20
Plasma	19
Genotype	16
Malaria	15
Reagent	11
HIV / AIDS	10
Phenotype	11
PCR / polymerase chain reaction	8
Haemolysis	7
Leukemia	6
Lymphoma	6
Blood count	5
Storage (of blood)	5
Transfusion	5
Gametocyte	4

A typical post from this group included an image of a magnified slide of a blood condition, as shown in Fig. 7.

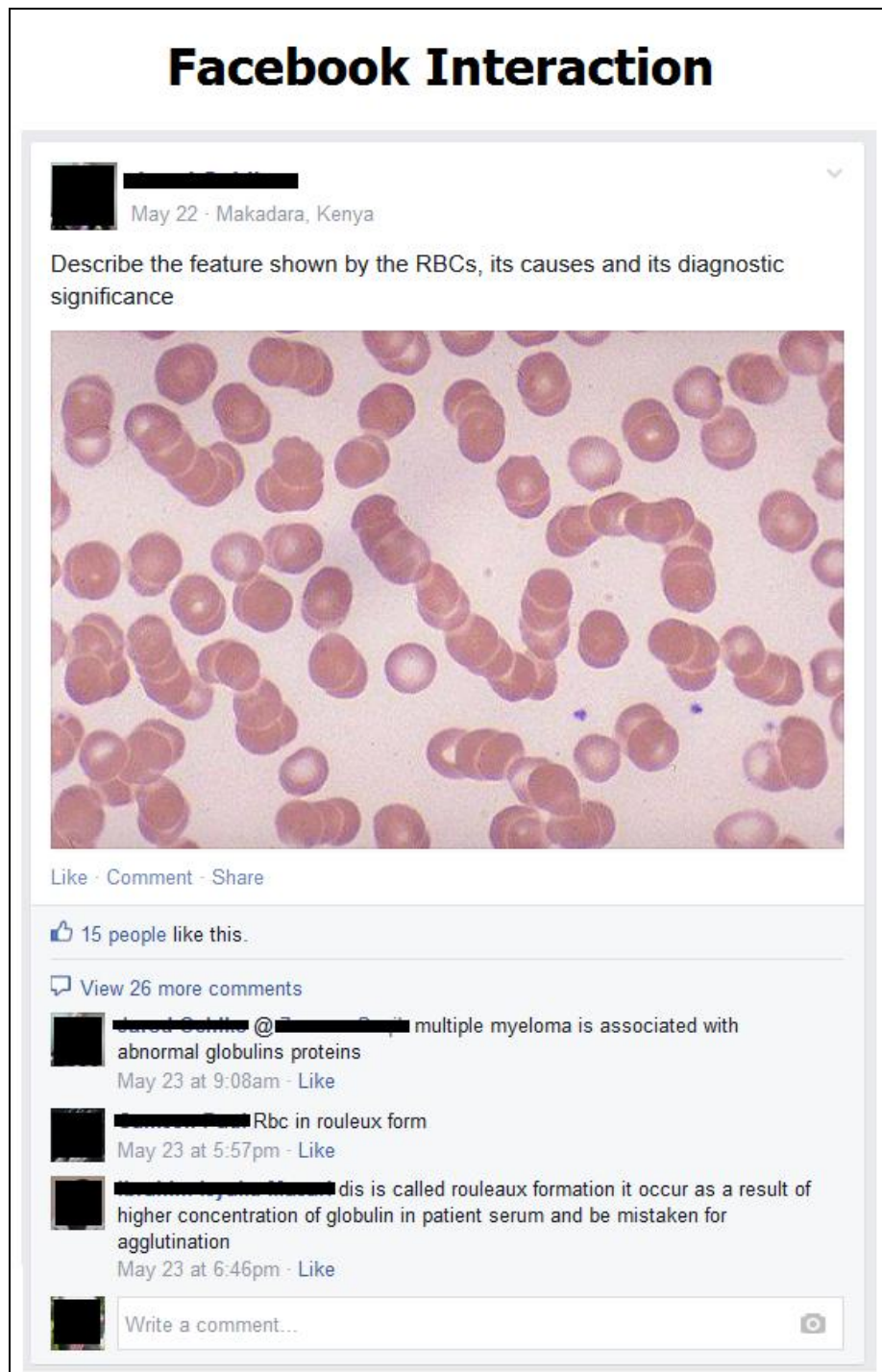


Fig. 7. Facebook Interaction in Haematology Research Forum Group

The Haematology Research Forum relies on crowdsourcing for answering questions and ensuring that knowledge is accurate. Crowdsourcing is distributing tasks to a large group of people; the advantage of which is to mine collective knowledge, assess quality, and process work together (Freebase, 2006). As with the AMLSN eLearning Group, in which e-learning course authors will be engaging the Group in asynchronous discussions (Mongan-Rallis & Shannon, 2006), the addition of active subject matter experts in the Haematology Research Forum Group will likely have immediate benefits. The benefits include additional focus on cutting-edge issues and topics as well as enhanced quality control of discussions.

4. Conclusion

Traditional self-paced e-learning courses coupled with a Facebook Group accommodates an informal, peer-to-peer learning style, allowing individuals to learn through peer support at times that are convenient to them. As an online resource, Facebook Groups meet many Nigerian Medical Laboratory Scientists where they are on Facebook. It also has shown, in K4Health's case, to be associated with high levels of engagement with e-learning courses and supports health research that concludes social media can effectively be used for knowledge dissemination (Usher et al., 2014; Kim & Vender, 2014).

Disclaimer: The information and knowledge shared on the Facebook Groups mentioned in this article are not a substitute for medical training nor should it supersede the policies and procedures of any medical facility. Medical information shared through the Groups should be validated prior to usage.

Acknowledgements

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References

- De Villiers, M. R. (2010). Academic use of a group on Facebook: Initial findings and perceptions. In *Proceedings of Informing Science & IT Education Conference (InSITE)*.
- Facebook. (2008). *About Facebook*. Menlo Park, CA. Retrieved from <https://www.facebook.com/facebook/info>
- Freebase. (2006). *Crowdsourcing*. Retrieved from http://www.freebase.com/m/0dcz_v
- K4Health. (2014). *eLearning Toolkit*. Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU•CCP): Baltimore, MD. Retrieved from <https://www.k4health.org/toolkits/elearning>
- Kim, W., & Vender, R. (2014). Use of Facebook as a tool for knowledge dissemination in dermatology. *Journal of Cutaneous Medicine and Surgery*, 18(0), 1–4.
- Lewis, K., Kaufman, J., Gonzalez, M., Wimmer, A., & Christakis, N. (2008). Tastes, ties, and time: A new social network dataset using Facebook.com. *Social Networks*, 30(4), 330–342.
- Mongan-Rallis, H., & Shannon, T. (2006). *So many tools so little time - Presentation to*

- classrooms of the future: Critical reflections on technology*. Education Department, University of Minnesota Duluth. Retrieved from <http://www.d.umn.edu/~hrallis/professional/presentations/cotfsp06/index.htm>
- Mwaikambo, L., Avila, M., Mazursky, S., & Nallathambi, K. (2012). Utilizing eLearning to strengthen the capacity of global health practitioners and institutions around the world. *Knowledge Management & E-Learning*, 4(3), 293–309.
- Mwaikambo, L., Ohkubo, S., & Cassaniti, J. (2013). Collaborative learning and stakeholder engagement: lessons and implications of the revitalization of the continuing professional development policy for health workers in Nigeria. *Knowledge Management for Development Journal*, 9(3), 63–78.
- University Marketing and Communications, Clark University. (n.d.). *Clark University social media guidelines*. Clark University, Worcester, MA. Retrieved from <http://www.clarku.edu/offices/marcom/guidesandpolicies/socialmedia.cfm>
- Usher, K., Woods, C., Casellac, E., Glass, N., Wilson, R., Mayner, L., Jackson, D., Brown, J., Duffy, E., Mather, C., Cummings, E., & Irwin, P. (2014). Australian health professions student use of social media. *Collegian*, 21(2), 95–101.