Designing purposive MOOCs for disease elimination

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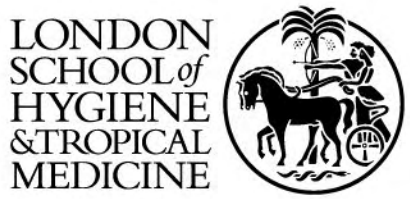


Using MOOCs to achieve disease elimination

In 2016 LSHTM created the first MOOC in ‘Eliminating Trachoma’

Aim: Improving access to training, to equip and mobilise large numbers of eye care workers, from different cadres, to achieve ‘GET 2020’

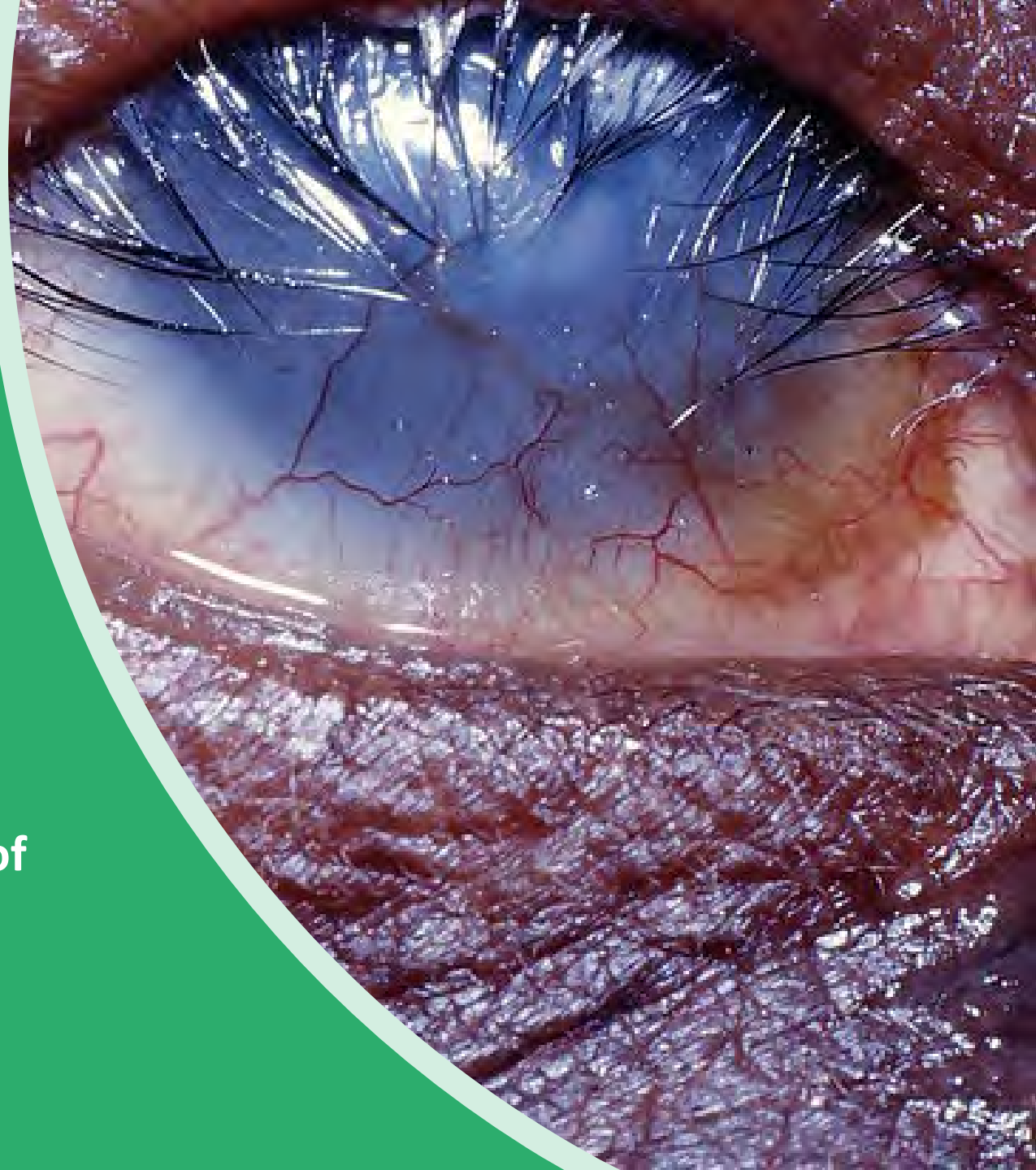
“GET 2020 is a partnership which supports country implementation of the SAFE strategy and the strengthening of national capacity through epidemiological assessment, monitoring, surveillance, project evaluation and resource mobilization.” **(WHO, 2017)**

What is trachoma?

Trachoma is a neglected tropical disease and the leading infectious cause of blindness

It occurs in some of the poorest populations with limited access to clean water, sanitation, and healthcare

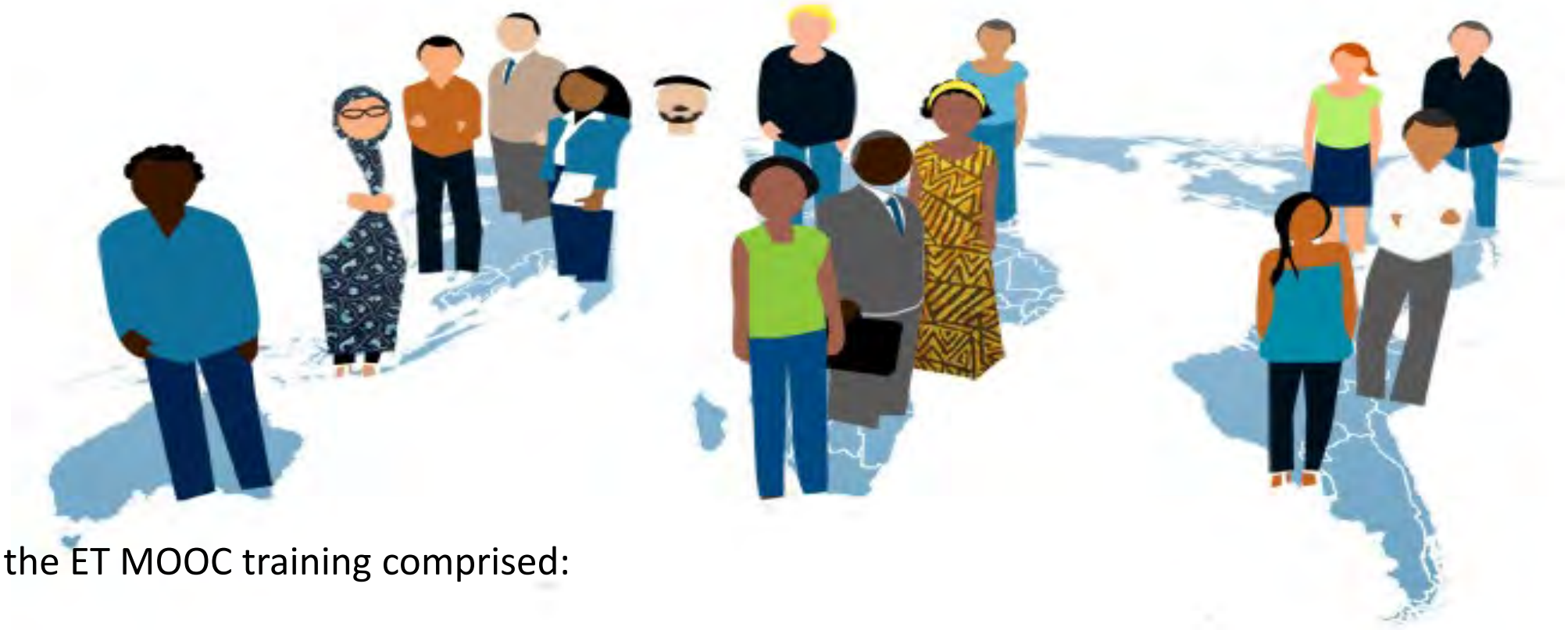
Trachoma is preventable, yet it continues to affect more than 181 million people in some of the poorest communities across 42 countries



- Surgery
- Antibiotics
- Facial cleanliness
- Environment

Training Challenges

Training and equipping is pivotal to the success of the ‘GET 2020’ programme

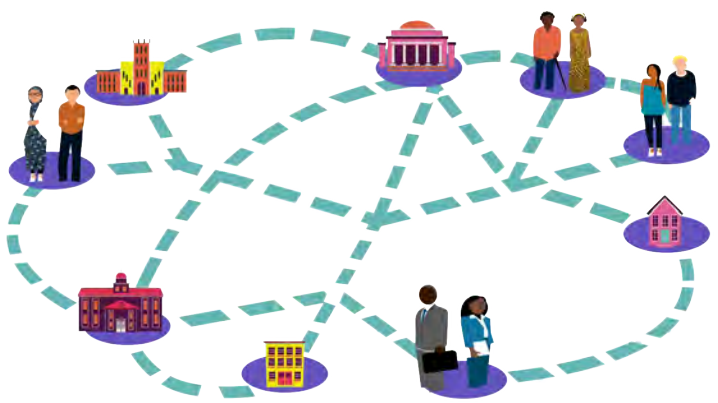


Before the ET MOOC training comprised:

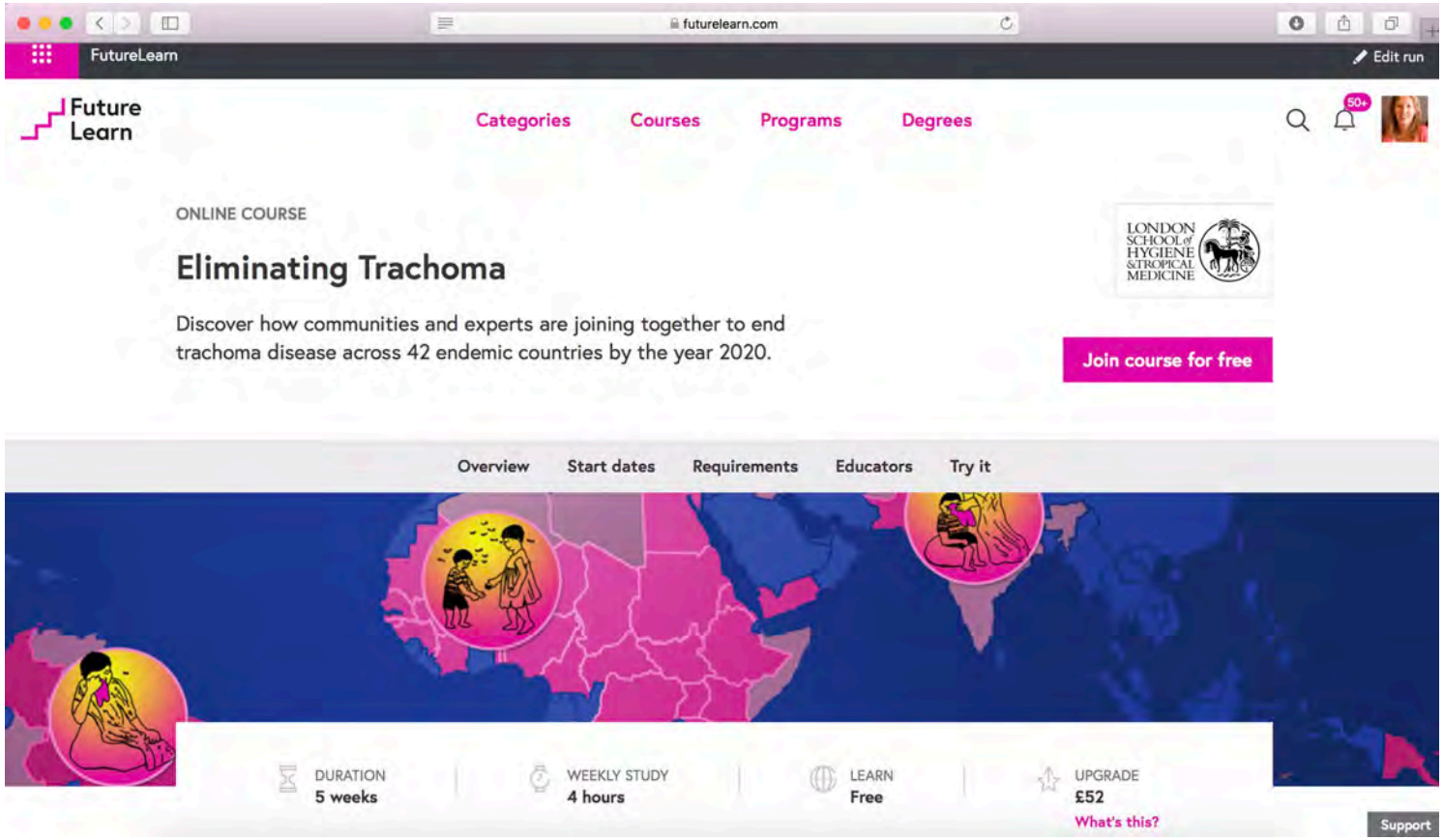
- small, face-to-face teaching workshops, run by experts, in multiple locations with limited participation due to time, travel and funding constraints
- distribution of a range of training manuals (which became outdated)

Why MOOCs / OERs?

Provide an opportunity to address global health training challenges by:



- improving availability and access to quality training
- making it possible to take training in public health for trachoma to a global audience of learners in remote settings via laptop, mobile and tablet
- reaching beyond institutional boundaries to health workers who might otherwise not be able to engage in learning opportunities
- sharing high quality resources with educators, enabling further use, sharing and adaptation of the training in specific local contexts



Eliminating Trachoma MOOC/OER

Course aim:

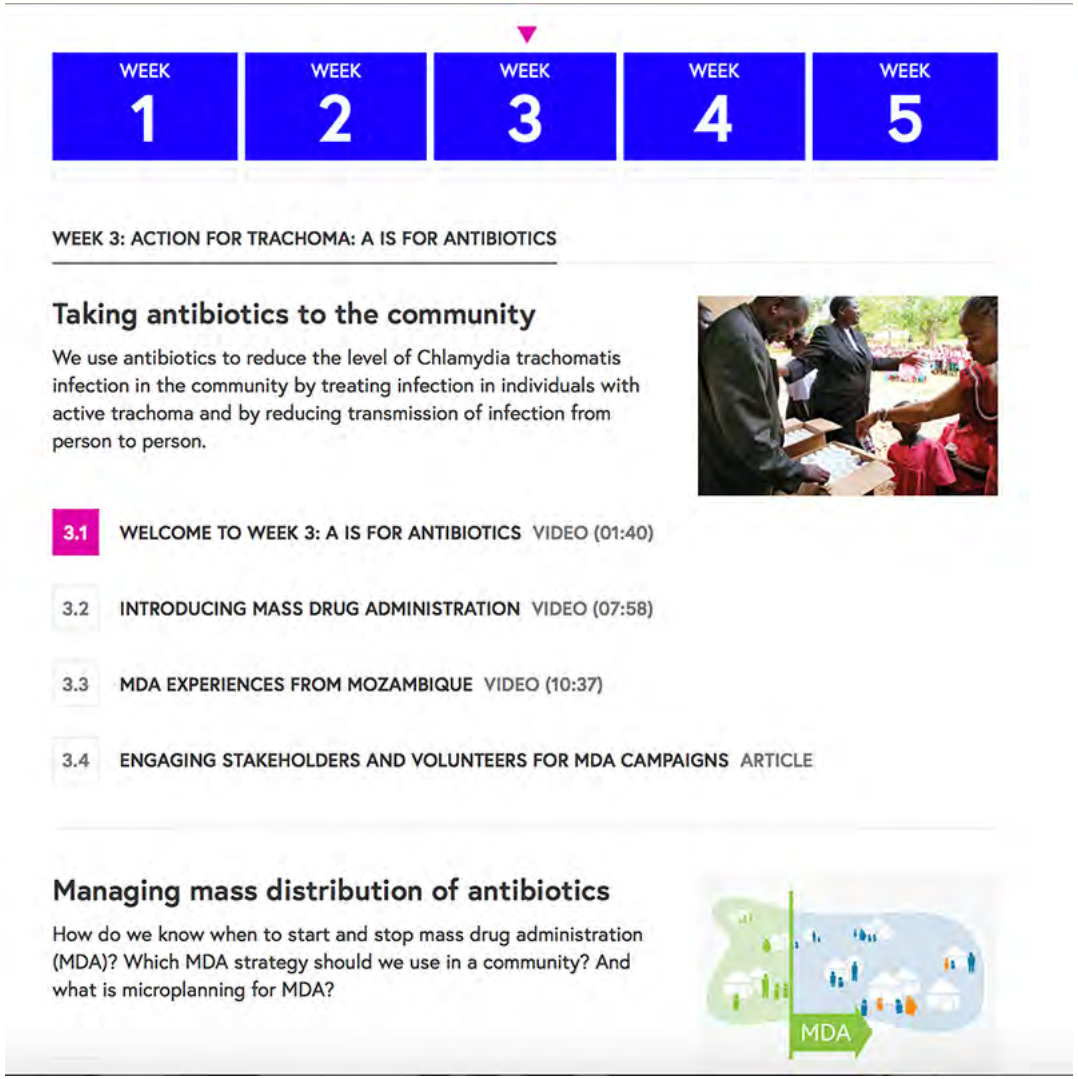
To enable people working in trachoma endemic countries to implement and manage a trachoma elimination programme at the national, district and community level

The innovation for the approach was to:

- bridge the existing gap in access to knowledge
- collate expertise and guidance into one course
- develop a learning design relevant for a wide range of practitioners and stakeholders

Course design

- Content provided as OERs in multiple interactive and lightweight formats to promote wide engagement and re-use
- Videos and articles supported by discussions to enhance peer and inter-professional engagement, linked to narratives from trachoma endemic communities
- Global experts from the WHO, international NGO sector, GET 2020 consortium members and researchers were brought together with local practitioners and educators working in eliminating trachoma
- Facilitation was also provided through Google hangouts with a panel of experts



What happened?

The course has had 4 runs with more than **5,300 participants** (2,621 learners) representing 157 countries (**88% of trachoma endemic countries**)

Close to half of those taking the course worked in trachoma related roles/activities: clinical staff, MDA staff, WASH, project/programme managers, regional coordinators, trachoma trainers, QA, laboratory personnel, grants/fund/office managers

Evaluation of the teaching and learning process was undertaken through pre and post course surveys, assessment of the analytics and from discussion forums within the course:

- Participants repeatedly mentioned application of learning at the local level through knowledge sharing, teaching and sharing of the OERs

- Results indicated that participants had found the content to be directly relevant and applicable to their role in eliminating trachoma

What was the purpose of the ET MOOC?

This MOOC was intentionally designed to reach large numbers of healthcare workers in trachoma endemic countries, to equip and empower them towards achieving the goal of GET 2020

- WHO are looking to assign recognition to this course and are hoping that it will replace the need to run workshops in individual countries

- It is hoped that this course will be incorporated into wider training for Neglected Tropical Diseases (NTDs), providing a long-term educational legacy

Assessing impact

Findings will be made available to the international GET 2020 stakeholders and used to inform decision-making and strategies for the ongoing training and equipping of those involved in trachoma elimination activities

It is therefore really important to understand:

- **If, and how the course has achieved its purpose**
- **If the course was accessible and relevant for each of the different healthcare cadres working in trachoma**
- **If the content and resources have been re-used by individuals and educators**
- **The impact of the training on the individual, teams, communities in their roles and ultimately the impact on those suffering with trachoma**
- **In which ways this learning experience contributed to achieving the goal of trachoma elimination**

Course evaluation - limitations

Existing evaluation tools provides only a “snap shot” of the course experience and not an in-depth understanding on how the learning has enabled the person to influence practice

Participant satisfaction and completion rates provide an inadequate understanding of its impact:

“It may be misleading to attribute performance success back to community or networking activities unless one can tell how these activities ultimately contributed to observed improvements. By itself one indicator is merely suggestive and one story is anecdotal, but the cumulative effect of a set of indicators with a collection of related corroborating stories starts to provide robust evidence.” (Wenger et al., 2011)

In-depth follow-up of how the learning is being used is key to evaluating the true success, or value, of MOOCs aimed at professional adult learners

Evaluation of the ET MOOC

We aim to evaluate and assess the:

- value of the learning gained by ET MOOC participants from the Eliminating Trachoma MOOC
- extent to which they been able to apply their learning from the course as practitioners and educators
- value created from the ‘specifically commissioned MOOC' towards the GET 2020 agenda from the perspective of different stakeholders
- barriers and enablers for learning from MOOCs across the different settings

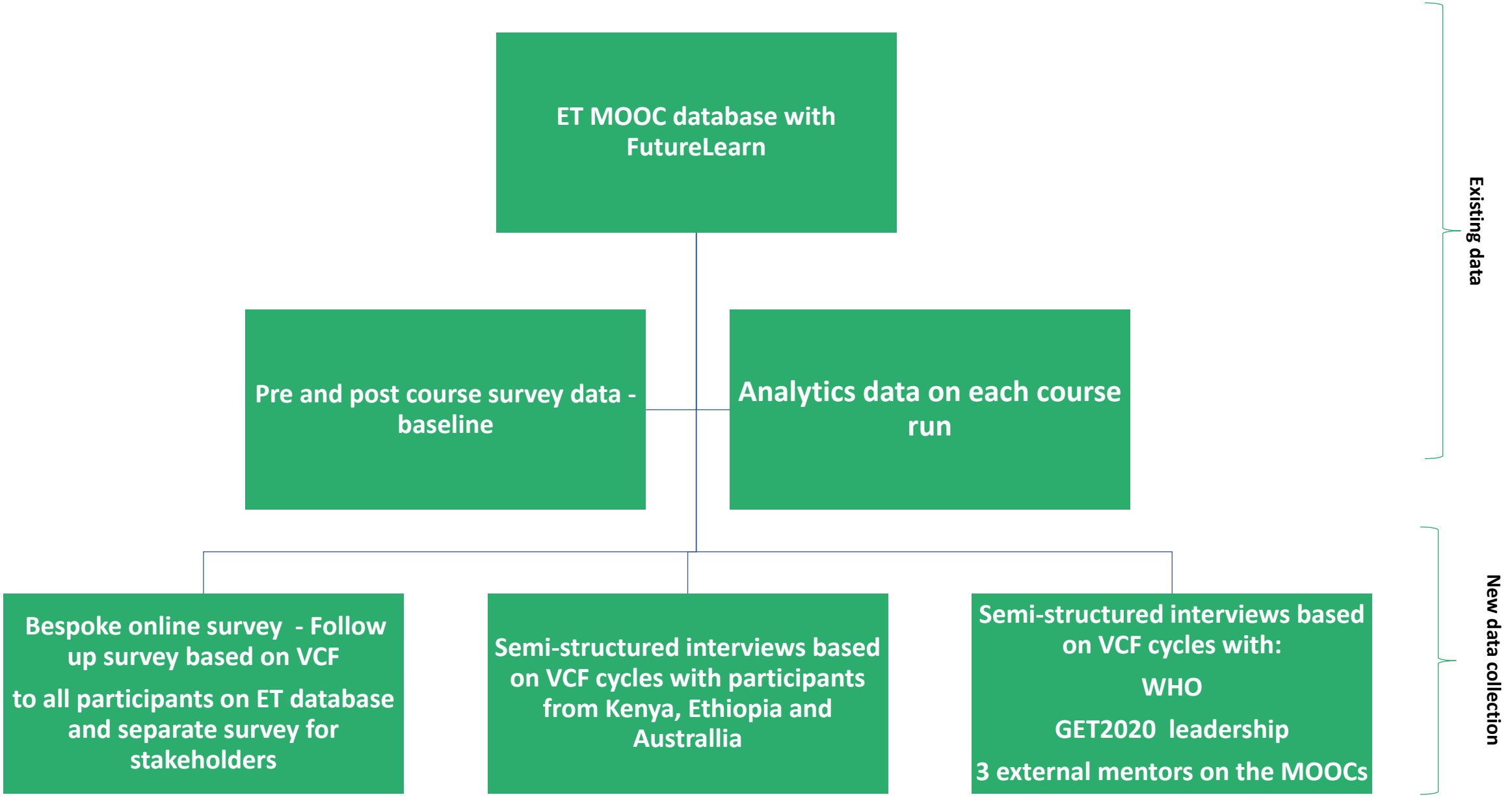
by creating and applying a **‘Value-creation framework’**

The value creation framework (VCF)

Capturing "the learning enabled by community involvement and networking"
(Wenger et al., 2011)

Indicators

Stakeholders	Cycle 1. Immediate value	Cycle 2. Potential value	Cycle 3. Applied value	Cycle 4. Realized value	Cycle 5. Reframing value
Health worker or educator	Levels of access, activity, participation, connections & interactions with people/resources Value and quality of above Meta conversations about the network	Information received Skills acquired Change in perspective Inspiration Confidence Types and intensity of social relationships	Implementation of advice & solutions Reuse of products and tools Use of social connections New processes or policies Innovation in practice Transferring learning practices	Personal performance Organisational performance & reputation Knowledge products as performance	Community aspirations Assessment Relationships with stakeholders Institutional changes New frameworks
Manager					
Planner / policymaker					
Sponsor					


ET MOOC database with FutureLearn
Pre and post course survey data - baseline
Analytics data on each course run
Bespoke online survey - Follow up survey based on VCF
to all participants on ET database and separate survey for stakeholders
Semi-structured interviews based on VCF cycles with participants from Kenya, Ethiopia and Australlia
Semi-structured interviews based on VCF cycles with:
WHO
GET2020 leadership
3 external mentors on the MOOCs
Existing data
New data collection

Trachoma MOOC/OER VCF: Examples

Cycle 1. Immediate value	Cycle 2. Potential value	Cycle 3. Applied value	Cycle 4. Realized value	Cycle 5. Reframing value
I have learnt that partnership to eliminate blinding trachoma is very crucial and implementing A & S components alone may not eliminate blinding trachoma in endemic areas *I now understand the causes of Trachoma, the signs and symptoms, it's prevention and treatment. As an eye care practitioner, this course is an eye opener for an accurate diagnosis of the disease.* *It has broadened my knowledge of trachoma and increased my confidence in teaching other people in my team.*	*"My understanding of trichiasis and trachoma has given me a new perceptive to see basic hygienic and environment improvement with the holistic approach in order to reached GET 2020."* (A) *"Great course delivered in easy-to-understand language for non-medics. Now I can engage with the outreach team from a technical POV!" (A)* *Trachoma feels more alive in this lecture th it did back at school, guess it is because I statistic as well as reading comments fro people who are presently in the fore fron working to eliminate this. Will want to volunteer someday to have a hands-on experience.* *I have gained more information especially the TT recurrence and on how to proceed. we implement the TT surgery project, I hav seen a lot of valuable ideas and actions to take so as to do a better TT surgery work.* *What an interesting and informative course - thank you for expanding my knowledge about trachoma and the SAFE strategy leading to its elimination.*	*Four days back i conducted training for health workers on Trachoma. I can boldly say it was so easy for me to share my learning and also to encourage them to take part in the course*	*The course has helped me in my outreach programmes and counseling of clients,* *I worked in hyper endemic areas in South Sudan, and this course has help me to take necessary measure to hat SAFE reaches all ies.* *rian, currently ng a avers supported AFE project as a with local O - Health and t Support HANDS); I find ry timely and my work. I look forward to learning as much as possible and contributing as much as I could to the discourse; applying some of the shared creative ideas to my ongoing project activities in Trachoma endemic communities in Nigeria.*	*I hope to learn & share knowledge about Trachoma from future learn…with ambition to be an educator.*

Using VCF to develop quantitative & qualitative instruments for assessing impact

C1 – Immediate value

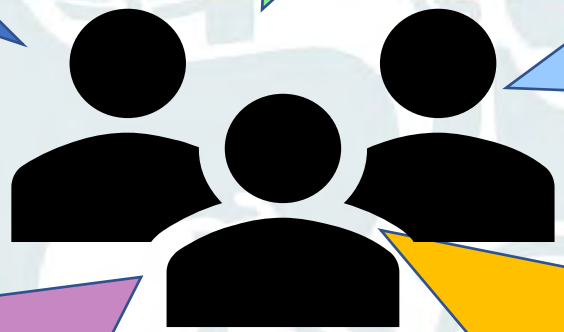
I have talked to different country staff and they really enjoyed the program.
I have also learned how to be a better facilitator

C2 – Potential value

It helps create a shared understanding of the SAFE strategy and how it has been applied in other countries.
It can be a good training tool.

3 – Applied value

I have asked new staff to go through the MOOC as part of their onboarding



5 – Reframing value

I have realized that I need to better understand the past research that has contributed to the current guidelines (best practices)

C4 – Realised value

I know it helped Ministry of Health program managers better understand the program, which made it easier to work with them

In summary

MOOCs have potential to scale up training and knowledge sharing for elimination of trachoma

- The course had **widened participation** in public health eye care education by reaching a range of eye health professionals across many countries, especially in LMI and trachoma endemic countries
- Learning **was applicable** at the local level
- OER content did support **further teaching and learning** at the local level
- Findings highlight the need to manage content quality and learning process with continued rigour

MOOCs can transcend the barriers to access to knowledge and with careful design can also enable interprofessional collaborative learning and networking from global to local

Thank-you

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Find out more
https://ICEH.lshtm.ac.uk/oer

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