SAWBO

Scientific Animations Without Borders

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PROBLEM STATEMENT

- 7,100+ languages spoken today globally (23 by half the world's population)*
- 800+ million people around the world are considered low-literate learners
- Minority language speakers rarely get life-improving knowledge in their own language
- In developing nation countries significant numbers of people live in rural areas
- Digital divide
- Need for solutions are often nuanced in time, space, and through local "systems" of delivery
- Global experts who "hold" knowledge do not have the bandwidth to deliver knowledge broadly to the above groups
- **PROBLEM – How can we develop a systems approach to make expert knowledge available to people across countries, cultures, languages, literacy levels, and other divides? How can we do this in a scalable and cost-effective manner?**

* https://www.ethnologue.com/guides/how-many-languages

Scientific Animations Without Borders

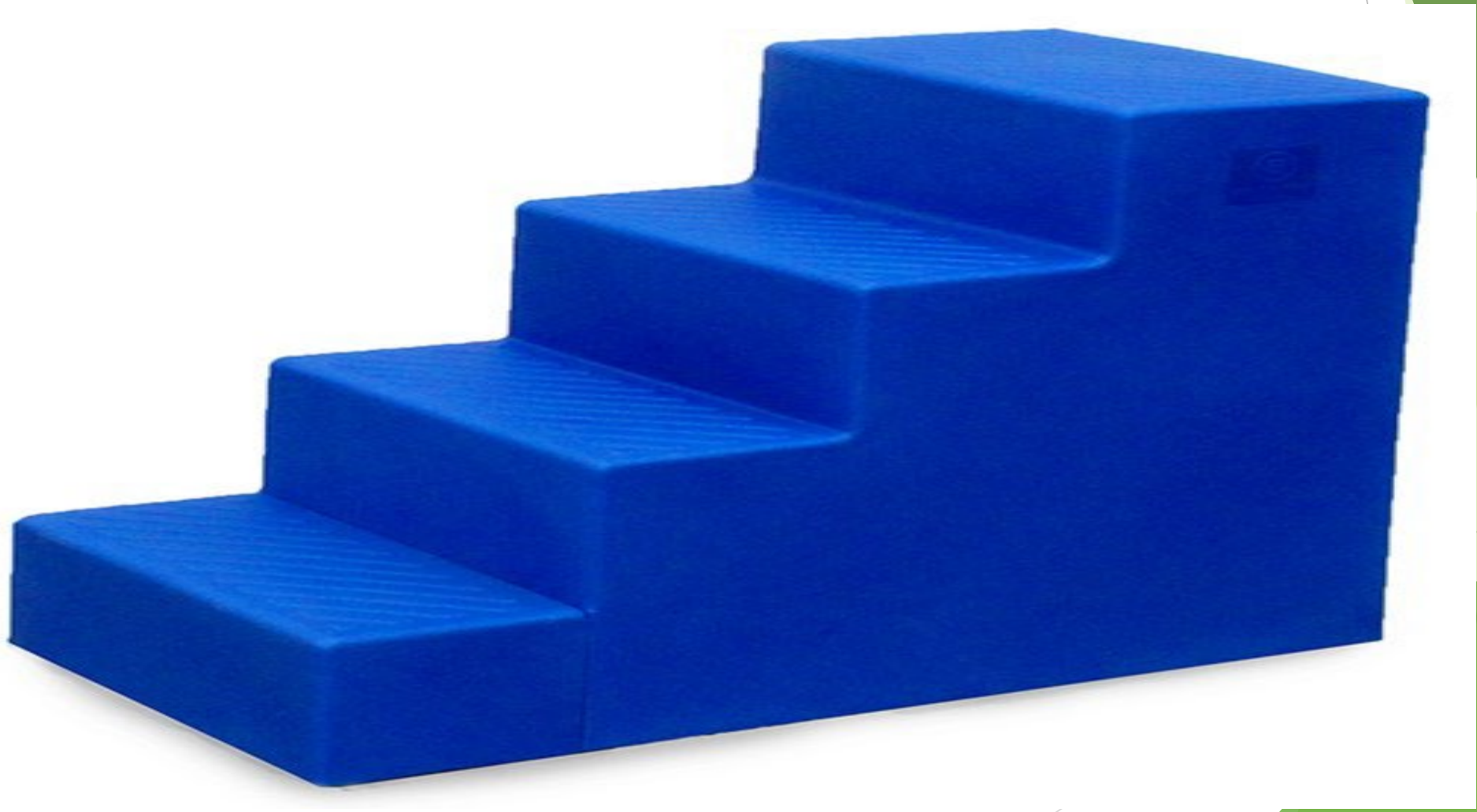
- 10+ Years in existence – Now based at Purdue University – Collaboration between ASEC and Entomology
- An academic exploration of "***How can we develop a systems approach to make expert knowledge available to people across countries, cultures, languages, literacy levels, and other divides? How can we do this in a scalable and cost-effective manner?***"
- Practical program with practical impacts
- *Research for Scaling – Scaling for Research*

Research for Scaling – Scaling for Research

- **Research** provides the necessary recommendations towards content creation and best practices **towards scaling**
- **Scaling efforts** provide considerable data towards **research**
  1. 134,000 farmers in Bangladesh – numerous parameters collected – Able to develop computational models to predict parameters that will optimize gender balance – time, place, trainer gender, etc.
  2. During COVID-19 crisis a “push of videos” to 11 million people through YouTube in four countries (Ghana, Nigeria, Kenya, and Bangladesh) revealed a highly cost-effective model to spread knowledge to people in over 100 languages on dealing with the COVID-19 crisis

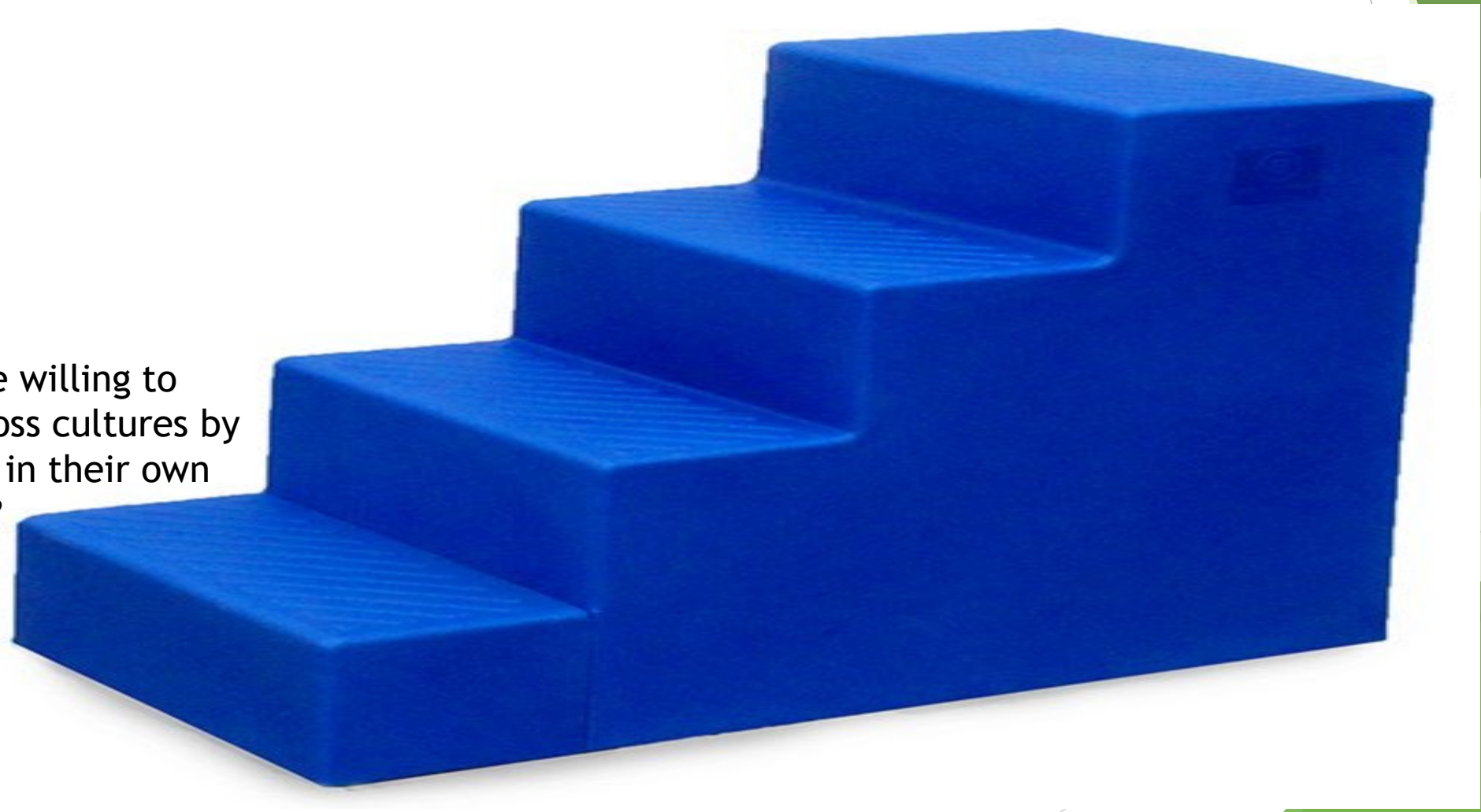
RESEARCH – A Decade of Fieldwork

My Research is Focused on Step-wise Questions



My Research is Focused on Step-wise Questions

Are people willing to learn (across cultures by animation in their own language)?



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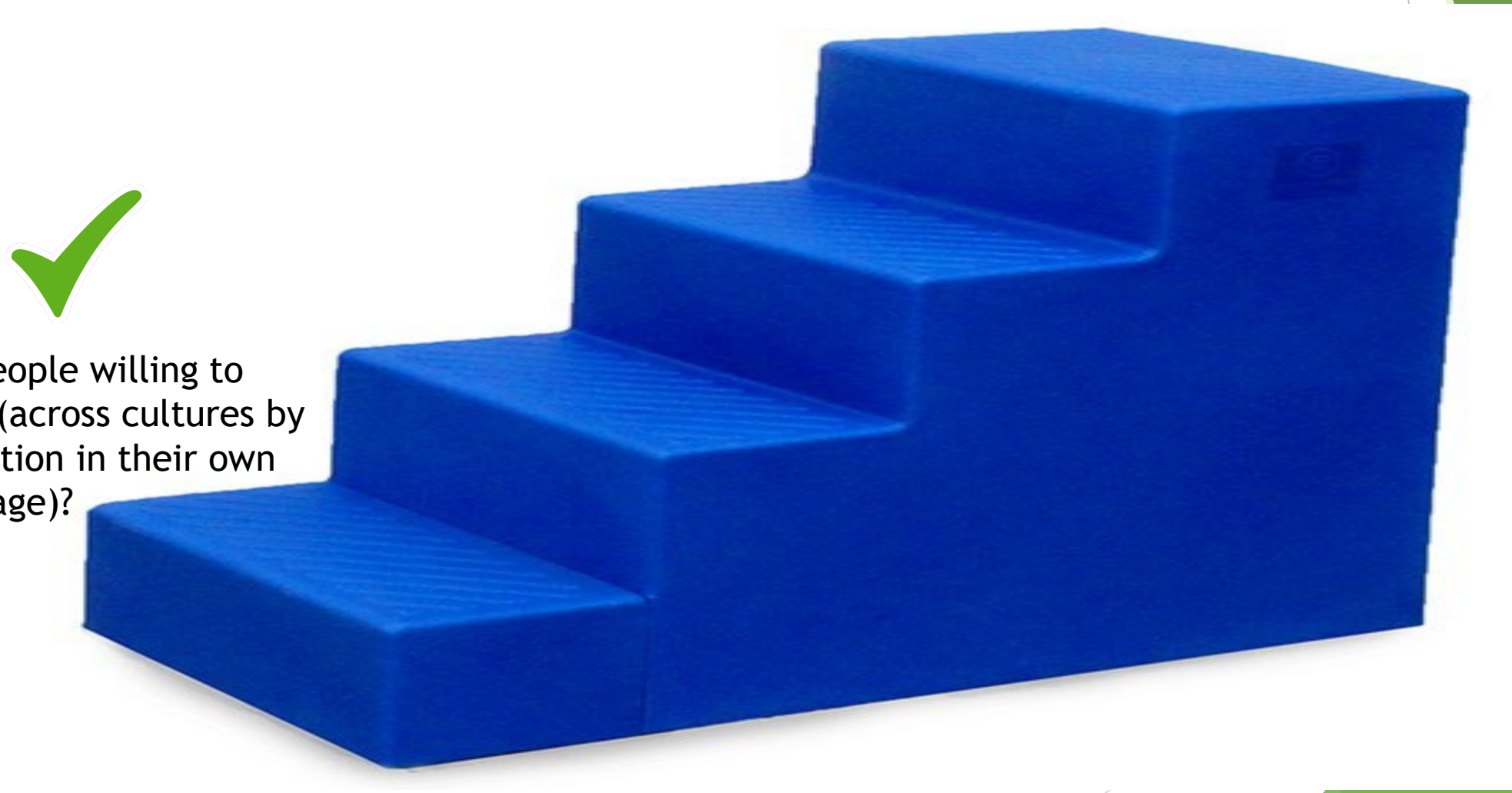

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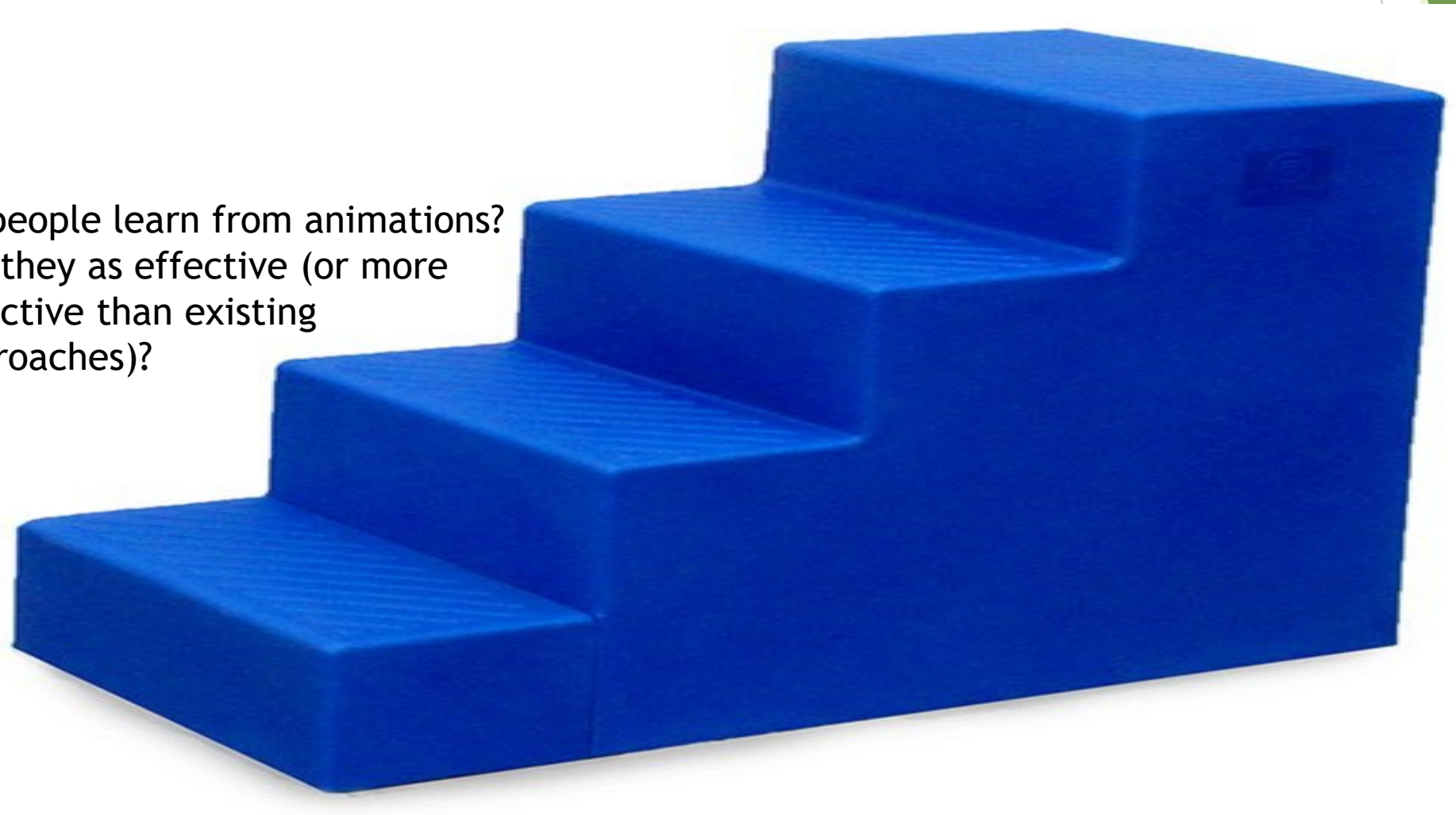

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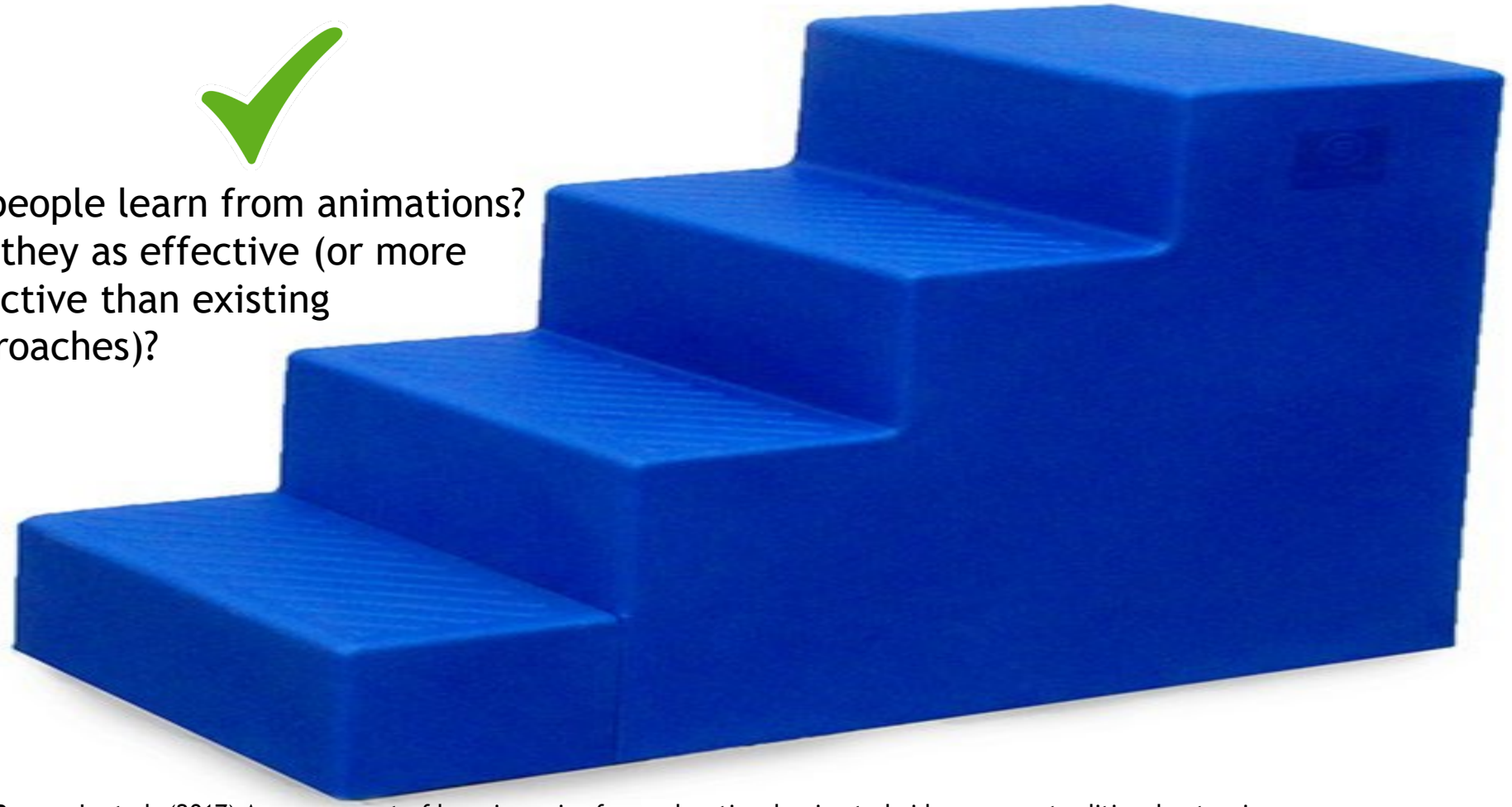

Bello-Bravo, J. et al. (2017) An assessment of learning gains from educational animated videos verses traditional extension presen- tations among farmers in Benin. Information Technology for Development. doi:10.1080/02 681102.2017.1298077.

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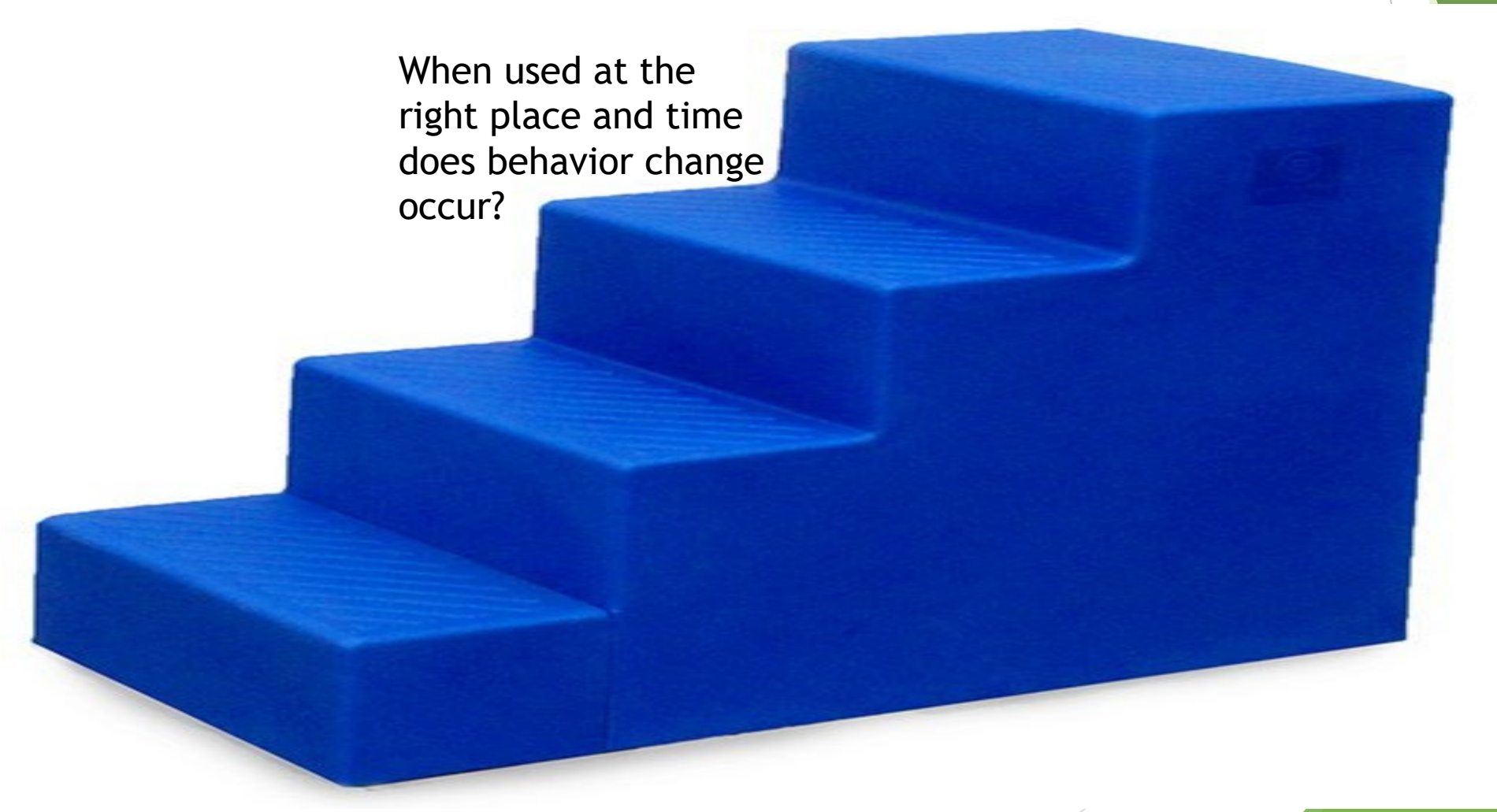
When used at the right place and time does behavior change occur?



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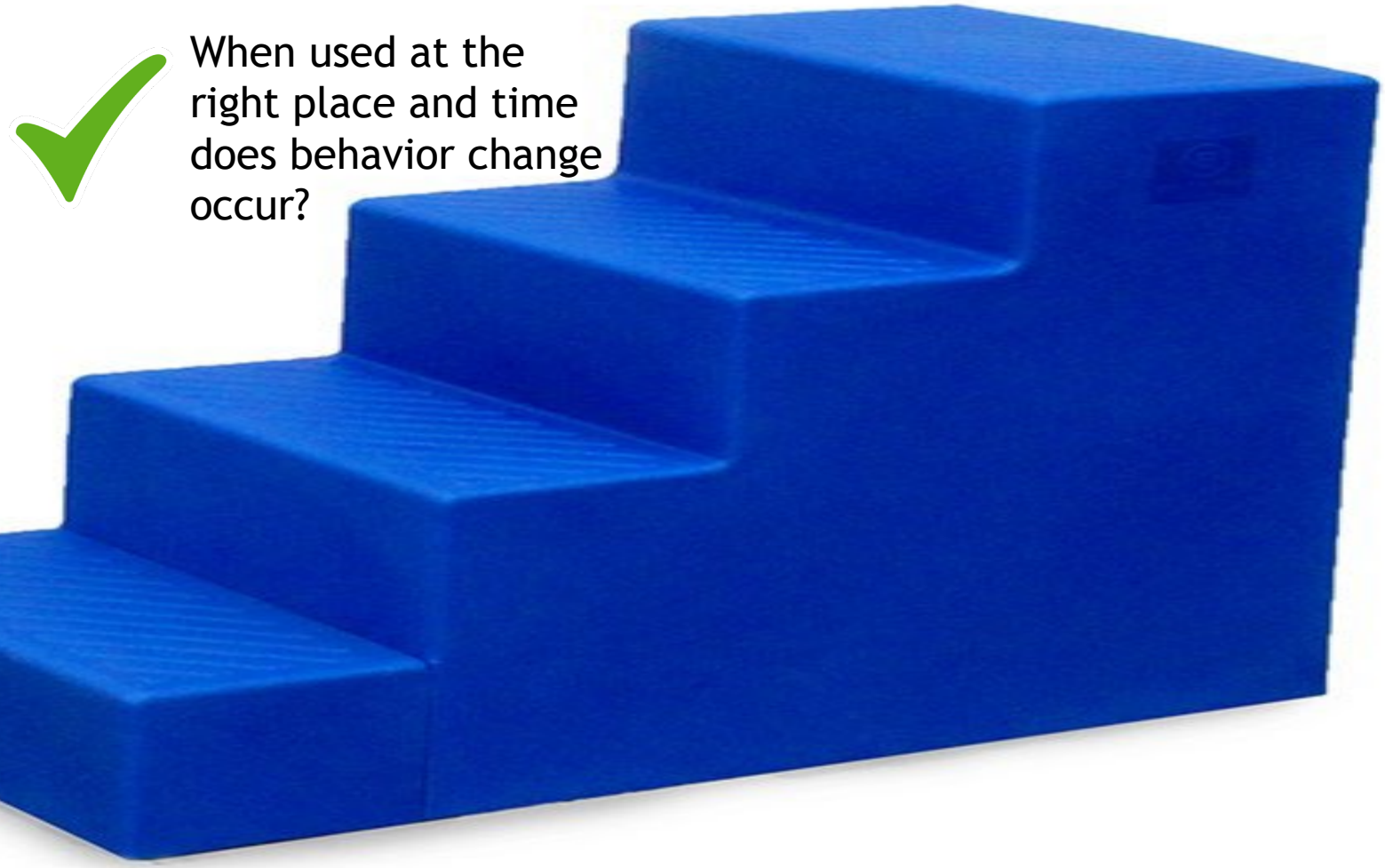

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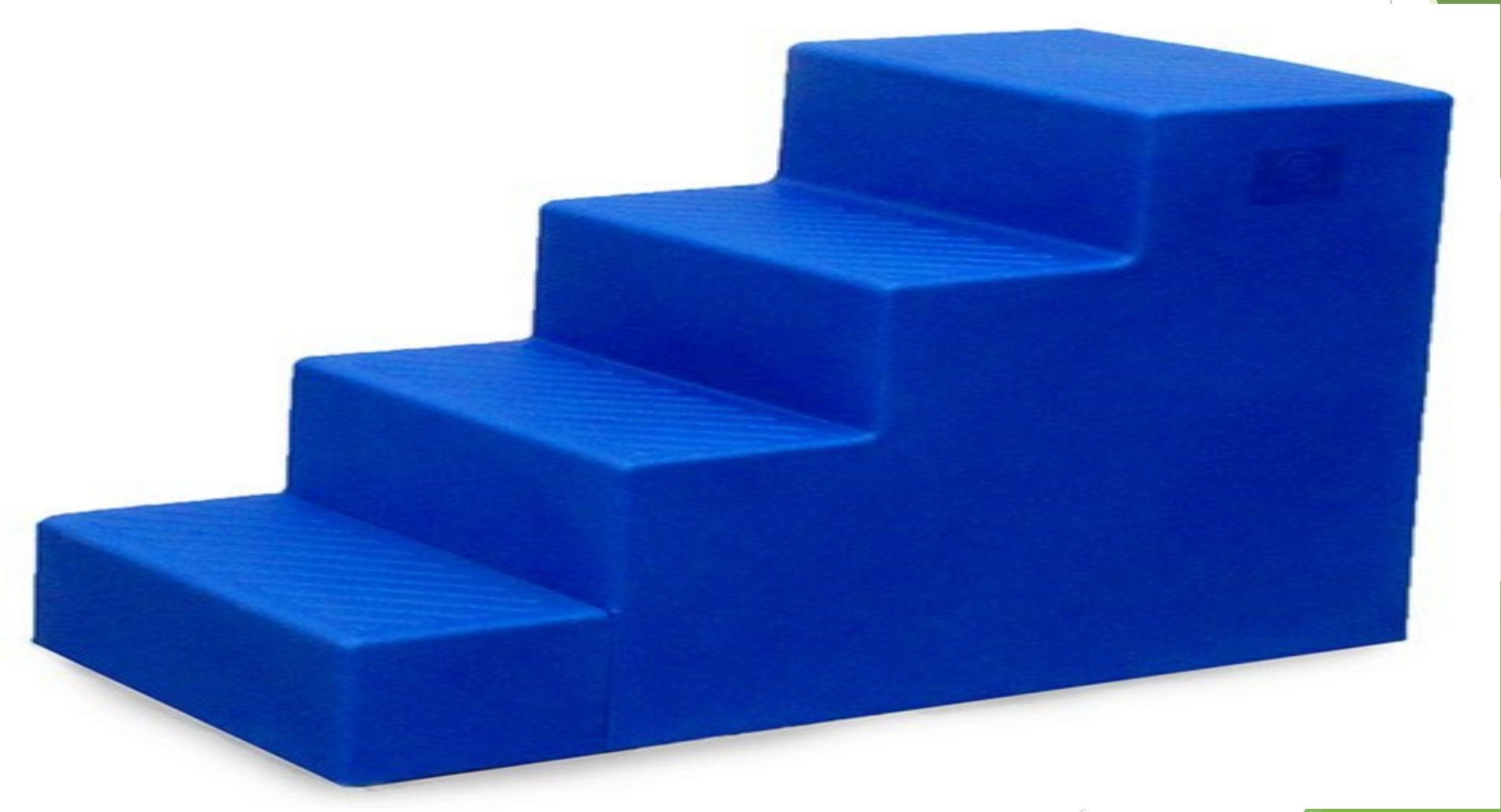

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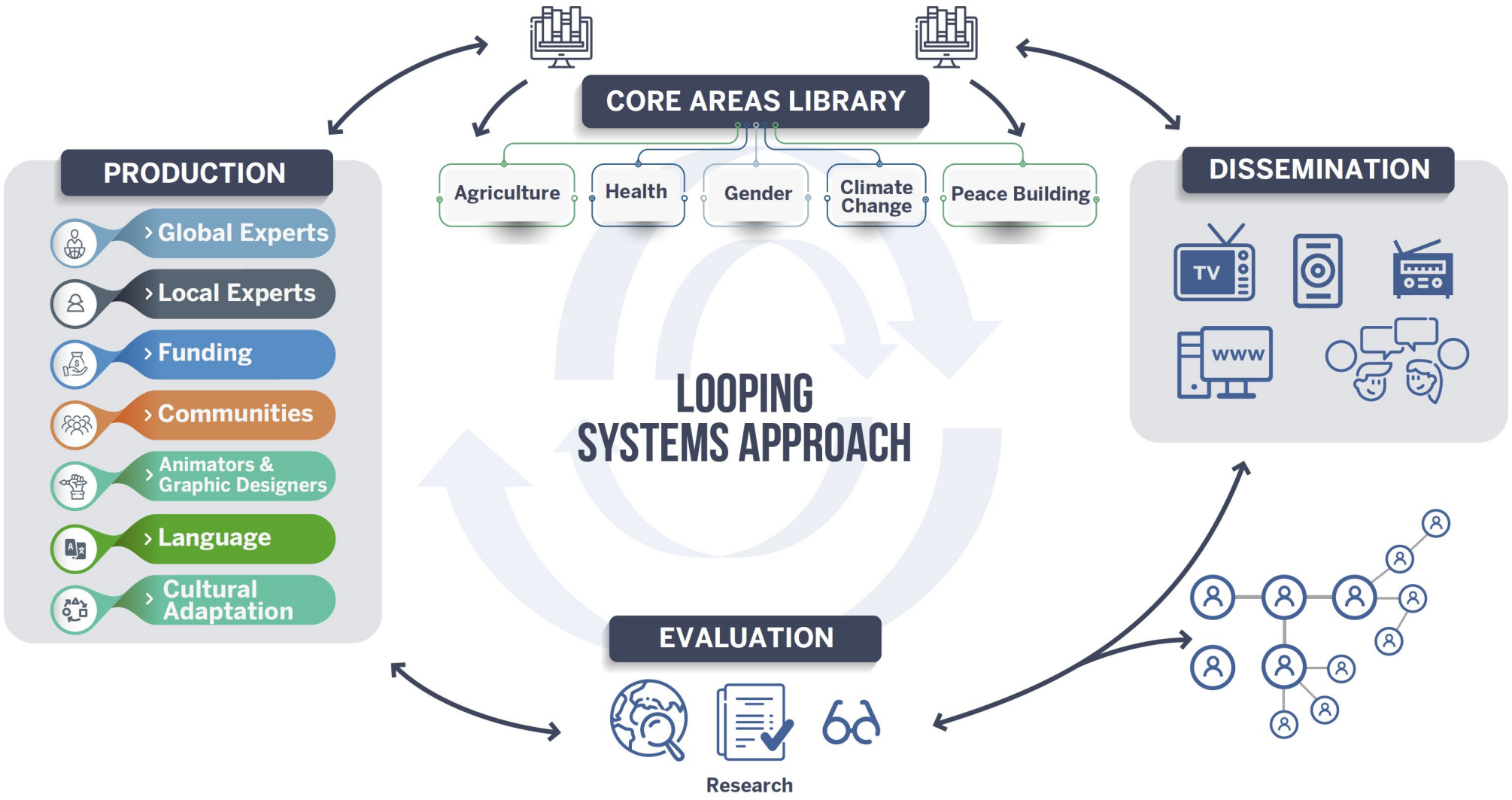
SAWBO'S SYSTEMS APPROACH



Where we stand with the system?

- 120+ topic areas of content, in over 260 languages, with known use in 130+ countries, with over 50 million known to be “touched” by SAWBO content (17 million YouTube views).
- Collaborations with FAO, the W.H.O., USAID, World Food Programme, numerous government and non-government organizations, TV stations, other formal and informal networks and organizations.
- 35+ Peer-reviewed publications – learning gains, adoption/adaptation, scaling
- Recent scaling efforts involves larger data sets (e.g., 134,000 farmers) – current efforts on machine learning to optimize large-scale dissemination
- Recent 1.6 million dollar USAID grant allowed us to scale to over 10+ million people (online and offline) in four countries

Many other Groups Use our Content

Ministry of Agriculture
Livestock Fisheries and
Cooperatives

Food and Agriculture
Organization of the
United Nations

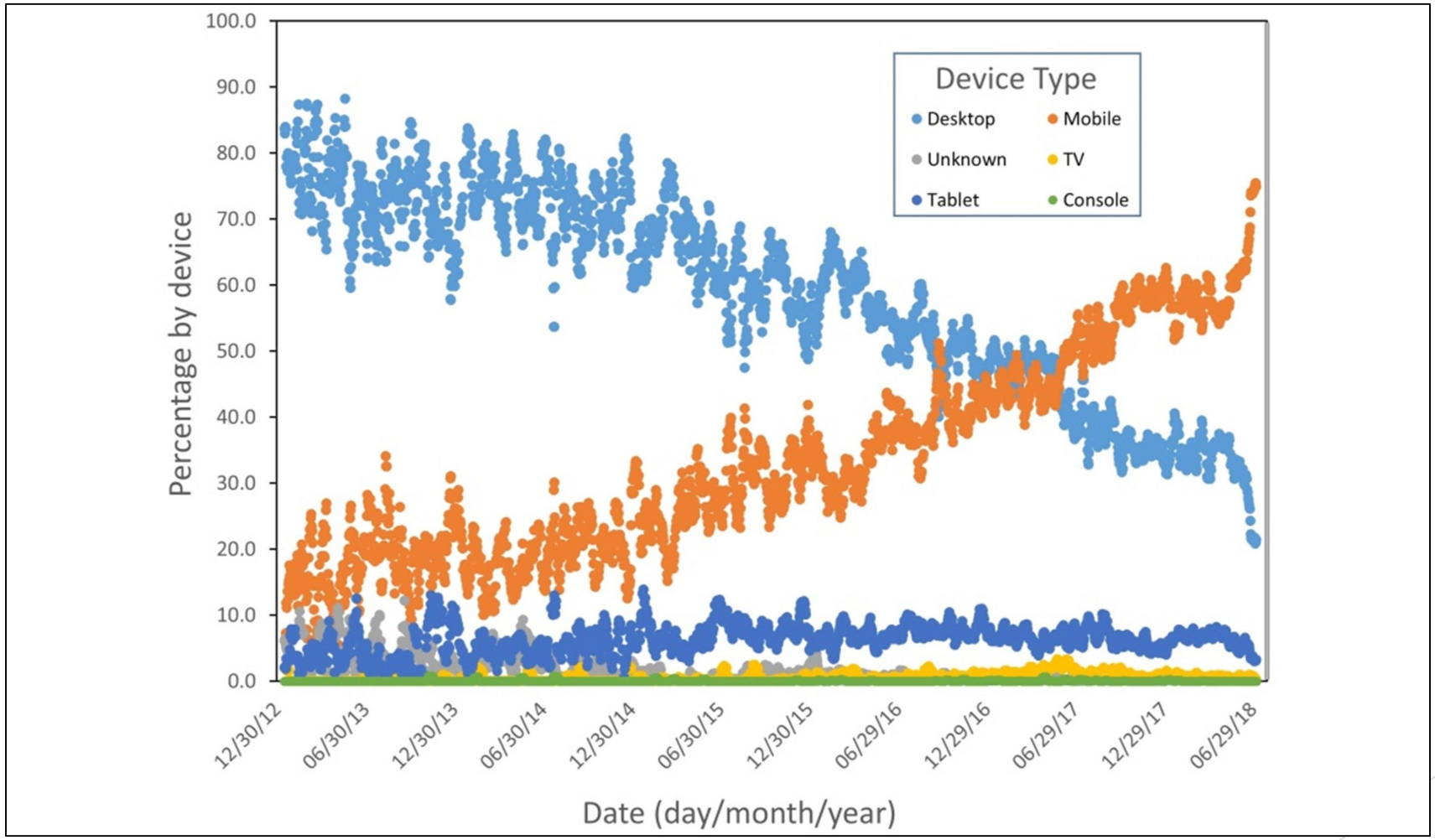
NIGERIA CENTRE FOR DISEASE CONTROL

JOHNS HOPKINS
Center for Communication
Programs™

Abriendo Caminos
Adama Science and Technology University
ADMI Institute for the Prevention of Postharvest Loss
AgBioResearch Michigan State University
All Things Health Arica (ATHA)
Alliance for a Green Revolution in Africa (AGRA)
Arewa24
Baylor College of Medicine
Baylor College of Medicine Children's Foundation Swaziland
Bill & Melinda Gates Foundation
Borlaug Higher Education for Agricultural Research and Development (BHEARD)
Breakthrough Action
Center for Learning and Childhood Development (CLCD)
Center for Learning and Community Development (CLCD)
Centre Valbio
CHEST Foundation
Chung Hwa University of Medical Technology
CIMMYT (CIMMYT)
Cleaner Cooking Coalition
Collaborative Crop Research Program McKnight Foundation (CCRP)
CRCHUM
Creole Inc.
CTA
CURE
Ecoation
eGranary Pocket Library
Farm Input Promotions Africa (FIPS Africa)
Farm Kenya
Federal University of Technology OWERRI (FUTO)
Feed the Future
Feed the Future Innovation Lab for Genomics to Improve Poultry (FTF GIP)
Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss
Feed the Future Integrated Pest Management
Food and Agriculture Organization of the United Nations (FAO)
Global Health Institute at Stony Brook University
Global Shea Alliance (GSA)
Global TB Program
Global Youth Groove (GYG)
Government of Canada
Governors State University
Healing Hands International (HHI)
ICIPE
IER
IITA
ILAD
Illinois College of Agriculture, Consumer & Environmental Sciences (ACES)
In Tune for Life
Institut de L'environnement et de Recherches Agricoles (INERA)
Institut National de la Recherche Agronomique du Niger (INRAN)
Institut Pasteur de Madagascar
Instituto de Investigacao Agraria de Mocambique (IIAM)
International Center for Tropical Agriculture (CIAT)
International Crops Research Institute for the Semi-arid Tropics (ICRISAT)
International Potato Center (CIP)
International Rivers
Iowa State University
Iowa State University Greenlee School of Journalism and Communication
Johns Hopkins Center for Communication Programs (CCP)
Kansas State University (KSU)
Legume Innovation Lab (LIL)
Lilongwe University of Agriculture and Natural Resources (LUANAR)
Michigan State University (MSU)
Michigan State University Department of Entomology
Ministry of Agriculture and Food Security, Mozambique
Ministry of Health, Tonga
MKTV
MSU FSHA
Nation Soybean Research Lab (NSRL)
Nigerian Center for Disease Control (NCDC)
Nigerian Federal Ministry of Health
Njala University
Northwestern University
NSF
Peanut Innovation Lab, University of Georgia
Public Health Institute of Mongolia
PULSE CRSP
Purdue Improved Crop Storage (PICS)
Purdue University (Purdue)
Residential College in the Arts and Humanities at Michigan State University (RCAH)
RONGEAD
Seeds of Change
Societas Entomologica Canadensis (ESC)
Stop TB Partnership TB REACH
SUMAQ Life
Swiss Tropical and Public Health Institute (Swiss TPH)
Texas State
The Chicago Council on Global Affairs
The Guide Project
UCSF Department of Medicine
United Nations (UN)
Universidad de Castilla La Mancha (UCLM)
Universidad Nacional de CUYO (UNCUYO)
Universite Dan Dicko Dankouloda de Maradi (UDDM)
University of Connecticut (UCONN)
University of Illinois at Chicago (UIC)
University of Illinois at Urbana-Champaign (UIUC)
University of Illinois Cancer Center (UICC)
University of Illinois Hospital and Health Sciences System Hematology and Oncology
University of Illinois Hospital Health Sciences System
University of Illinois School of Information Sciences
University of Minnesota Extension
University of Nebraska Lincoln
USAID
USCF Institute for Global Health Sciences
UT El Paso (UTEP)
World Food Programme (WFP)
World Health Organization (WHO)
YMCA Sierra Leone
YMCA University of Illinois at Urbana-Champaign

This data allows us to ask questions around diverse issues that drive scaling

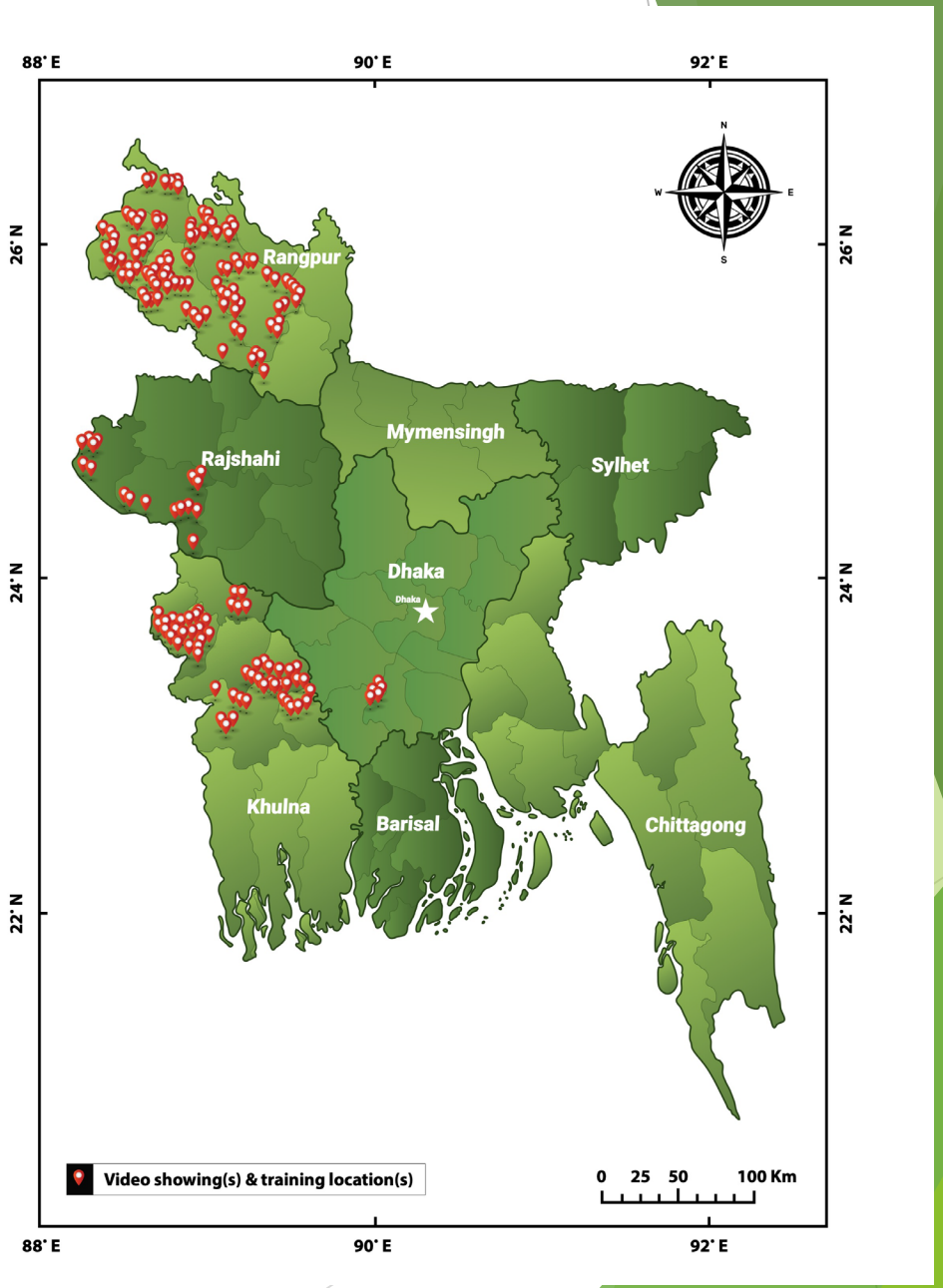
YouTube data allowed us to determine when smart phones overtook computers as the primary mechanism to access video-based educational content globally.



Bello-Bravo, J., Brooks, I., Lutomia, A. N., Bohonos, J. W., Medendorp, J., & Pittendrigh, B. R. (2021). Breaking out: The turning point in learning using mobile technology *Heliyon*, *7*(3), e06595. https://doi.org/10.1016/j.heliyon.2021.e06595

Large-Scale Extension Events

- The International Maize and Wheat Improvement Center (CIMMYT) trained 134,000 farmers in Bangladesh
- Collected data on events
- We looked at which parameters of these events optimized women participating in the trainings (gender balance)



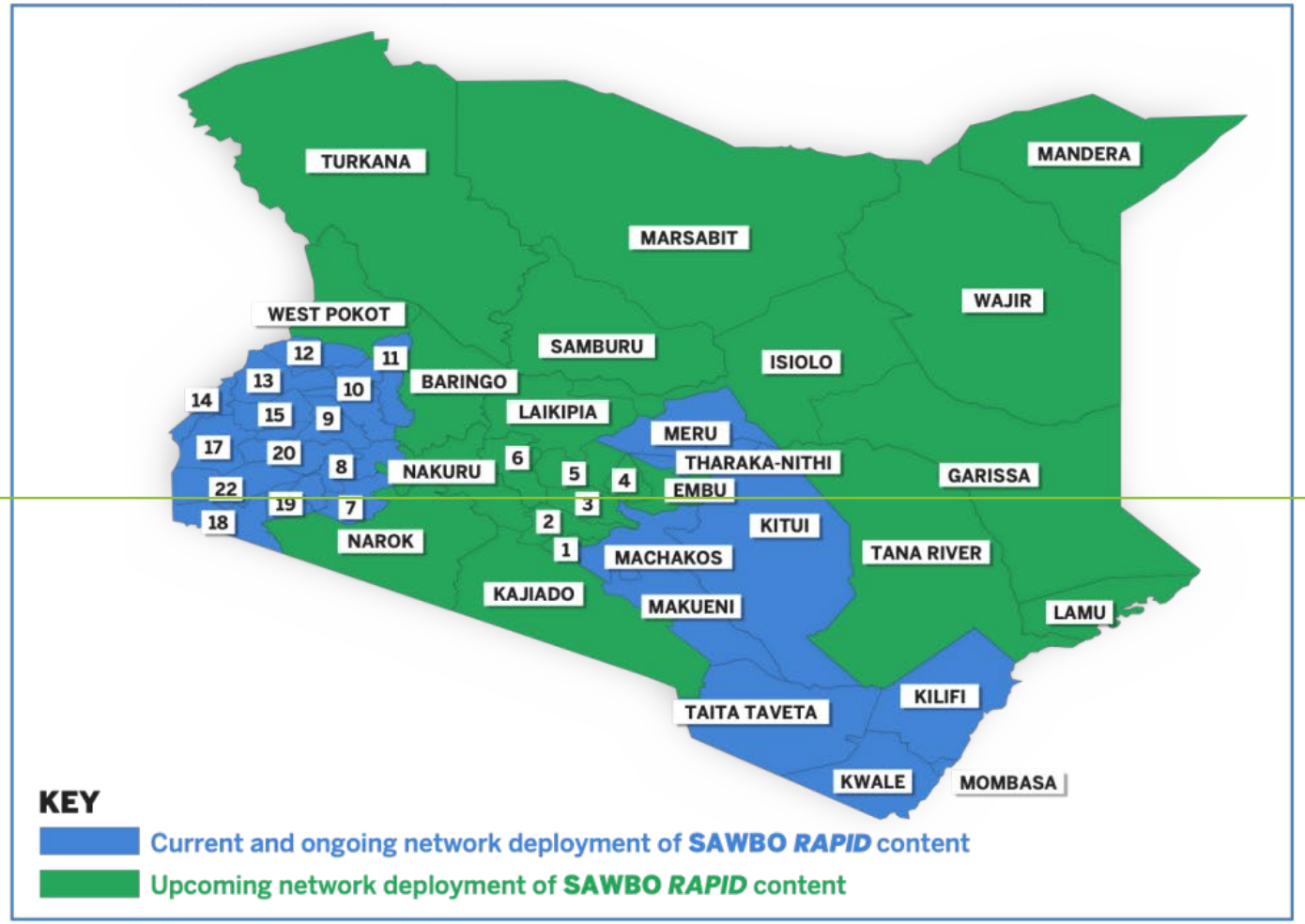
Manuscript in revision at PLOS ONE.

1.6 million dollar USAID grant allowed us to distribute content in four countries in 100 languages

- 10 million plus YouTube views, over a dozen TV stations, and local partner networks
- Whats App User groups
- Pre- and post-intervention studies in three countries to look at country-wide uptake of content

- Numbers do not capture full impact
- We traced movement of videos from networks to those that deployed locally to those that were impacted.

Kataru Concepts/SAWBO *RAPID* Deployment of Content by County in Kenya



1. NAIROBI
2. KIAMBU
3. MURANG'A
4. KIRINYAGA
5. NYERI
6. NYANDARUA
7. BOMET
8. KERICHO
9. TRANS NZOIA
10. UASIN GISHU
11. ELGEYO MARAKWET
12. NANDI
13. BUNGOMA
14. BUSIA
15. KAKAMEGA
16. VIHIGA
17. SIAYA
18. MIGORI
19. KISII
20. KISUMU
21. NYAMIRA
22. HOMA BAY

Lessons learned (from our local deployment partner) hosting the WhatsApp groups

- Open communication with the members
- Freedom to ask questions and seek clarification on all relevant process
- Guidance from Kataru Concepts and SAWBO
- Team support
- Need for educative digital content that enhances peer-to-peer education
- Appreciation of individual effort inspire group productivity
- Testimonial from James Kataru creator of two WhatsApp group in Kenya
- “I shifted my preference and passion by Kataru Concepts Network from political content to real development. SAWBO content showed a flexibility in our society and proved that communities are constantly seeking knowledge to improve their lives.”

Digital Divide (accessible to people without phones)

Testimonials from one who shared SAWBO videos in the village

- People were excited to see educational content in their local language.
  - “For people in the villages this was the first time they had received educational information in their own language”

Testimonials from a woman who watched SAWBO agricultural videos in Kenya

- Janet Adika watched the Jerrycan bean storage video in a training session organized by James Kamuye Kataru in June 2021 at Bulechia village, Kakamega County, Kenya.

"Since then, I have always selected the best from my harvest, and store it as seed for the next planting season less than six months away," says Janet.

Janet Adika


YELLOW MAIZE
10/01/2022
10/06/2022
BEANS/SEED
10/01/2022
10/06/2022
BEANS/SEED
10/01/2022
10/06/2022


YELLOW MAIZE
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10/06/2022
BEANS/SEED
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BEANS/SEED
10/01/2022
10/06/2022

What is the systems approach used by SAWBO?

SAWBO – A Systems Approach

EXPERTS

We work with global experts to ensure the accuracy of our content, including:

- Virtual collaborations
- Volunteers
- Language experts
- Content experts

CONTENT

We are constantly growing with new content

- Library of Animations
- Over 120 topics
- Over 250 languages

SCALABLE DEPLOYMENT STRATEGIES

- SAWBO App (Android version)
- Extension System in Your Wallet
- TV Stations
- NGO's
- APIs for other groups

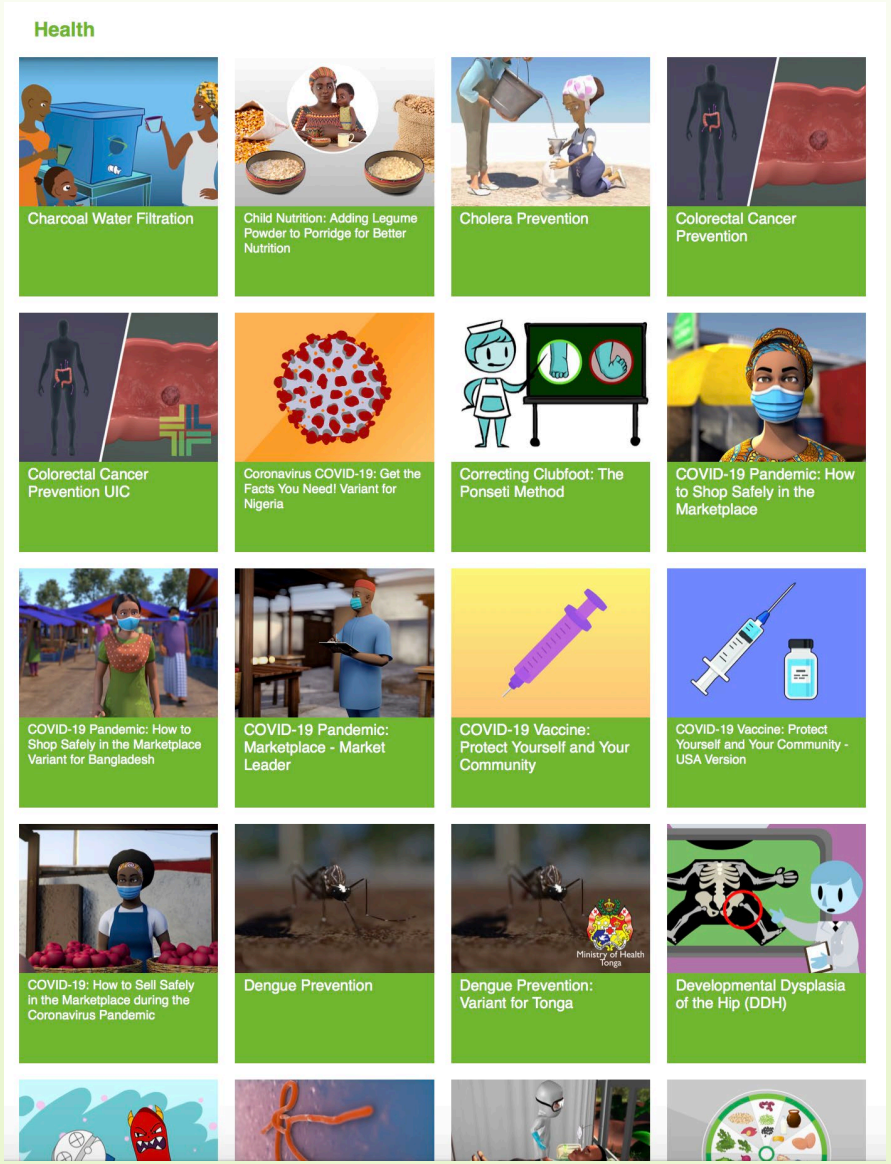
END USERS

- Dozens of Countries
- Dozens of partner groups
- Research studies
- Lessons learned in the field that provide critical input for new animations and new ideas to increase impact

Experts

- We have worked with hundreds of topic experts - hyper-collaboration
- Most collaborations have been in virtual space
- Over 500+ language experts to get content into various languages
- Global Talent – Student engagement

Content


Health
Charcoal Water Filtration
Child Nutrition: Adding Legume Powder to Porridge for Better Nutrition
Cholera Prevention
Colorectal Cancer Prevention
Colorectal Cancer Prevention UIC
Coronavirus COVID-19: Get the Facts You Need! Variant for Nigeria
Correcting Clubfoot: The Ponseti Method
COVID-19 Pandemic: How to Shop Safely in the Marketplace
COVID-19 Pandemic: How to Shop Safely in the Marketplace Variant for Bangladesh
COVID-19 Pandemic: Marketplace - Market Leader
COVID-19 Vaccine: Protect Yourself and Your Community
COVID-19 Vaccine: Protect Yourself and Your Community - USA Version
COVID-19: How to Sell Safely in the Marketplace during the Coronavirus Pandemic
Dengue Prevention
Ministry of Health Tonga
Dengue Prevention: Variant for Tonga
Developmental Dysplasia of the Hip (DDH)

Content

VIDEO LIBRARY

Back to Videos

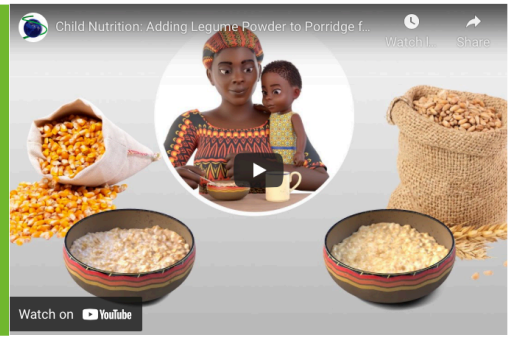
Share This Page

Health

Child Nutrition: Adding Legume Powder to Porridge for Better Nutrition

In this video, you will learn how to add crushed dried bean or cowpea powder to maize or grain porridge to feed your weening infants and young children. This added bean or cowpea powder provides the extra protein and nutrition children need to grow well.

Language: English Country: USA



Download:

--Select a Language--

Computer (.mp4) Broadcast (.mov) Smartphone (.3gp) Cellphone (.3gp Lite)

To download animations directly onto an android phone, download our app at Google Play.

We do not support iOS at this time. If you have an iOS device you may have trouble directly downloading our animations from the above links.

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SAWBO releases all of our animations freely for any educational purposes. If you have the means to donate, please click here. Your donation will help us continue to make content, and to provide that content freely to the world.

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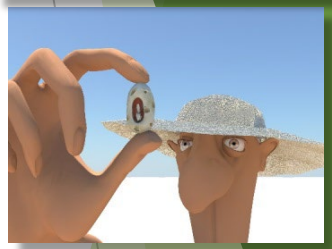
CORE TOPIC AREAS

HEALTH

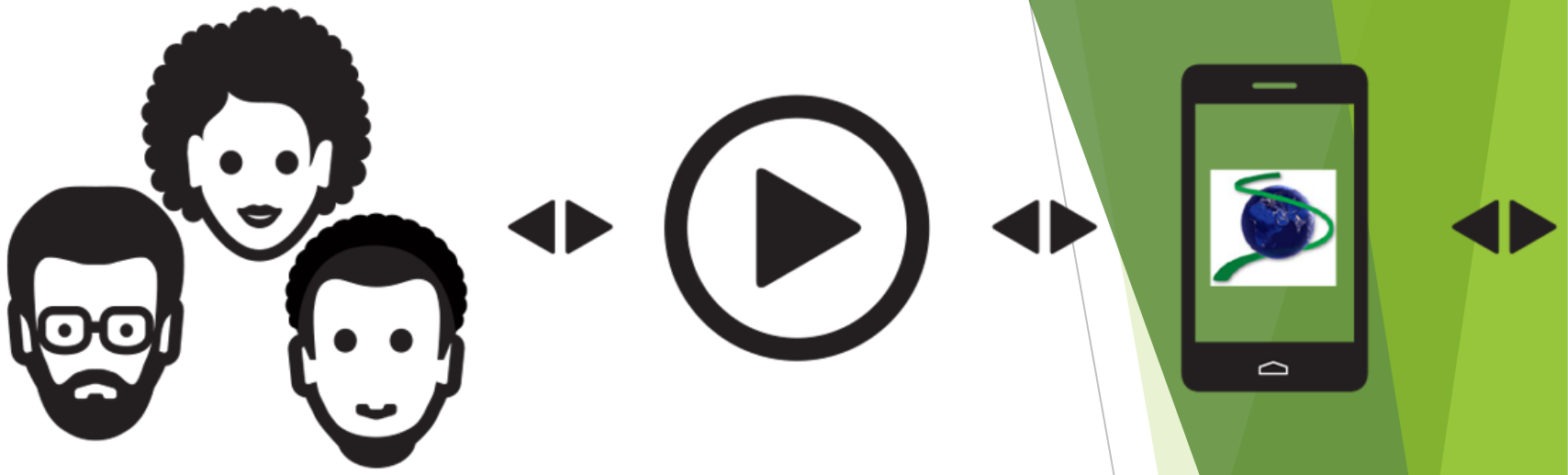
AGRICULTURE

WOMEN'S EMPOWERMENT

CONFLICT RESOLUTION


Scalable Deployment Strategies



- **Reducing Transaction Costs/Pass-off to Those that Deploy:**
  - 10 Million NGOs in the world, plus many other “scaling organizations”
  - Our goal is easy pass-off to others that **can and do** scale
  - Easy access to download from the SAWBO library
  - Our own App – Download any video or combination of videos and use
- **We study their scaling:**
  - What works and what does not work
  - Innovations in scaling

End Users

- **Two Target Groups:**
  - Those that use content for themselves
  - Those that use it in their educational programs
  - People/Groups can choose what makes sense for them in a time/place/etc
- **We study their scaling:**
  - What works and what does not work – Message and the Medium
  - Innovations in scaling

Individuals

- Easily accessible globally
- Easily sharable locally
- Actionable steps
- E.g., Video - https://www.youtube.com/watch?v=ZyOi7IzbqCU

Graduate Students

Kevin Thierry Affoukou,
Doctoral Student

Mavis Akom,
Doctoral Student

Collaborators (Entomology)

Dr. Anne Lutomia

Severina Adames

Dr. John Medendorp

Dr. Christian Krupke

Dr. Barry Pittendrigh

Conclusion

- My program is focused on discovery of how to share scientific knowledge across cultures, languages, and literacy levels, inclusive of gender and across digital divides
- Using SAWBO as a system approach to address these questions – and scaling educational content as a practical outcome

Thank you