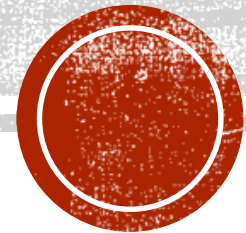


STEM LEARNING FOR CHILDREN IN RURAL AREAS

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Can be accessed at: <https://canvas.instructure.com/courses/1563986>

ABOUT THE PROJECT

- **MOTIVATION:** provide equal opportunities for **children in rural areas** to high quality STEM learning.
- **SDG #4:** “*Ensure **inclusive and equitable quality education** and **promote lifelong learning opportunities for all**”*
- **GOALS:** **equip teachers** with the basic principles of **teaching STEM** effectively through active and engaging learning experience **despite the limited resources.**
- **TARGET AUDIENCE:** elementary school teachers



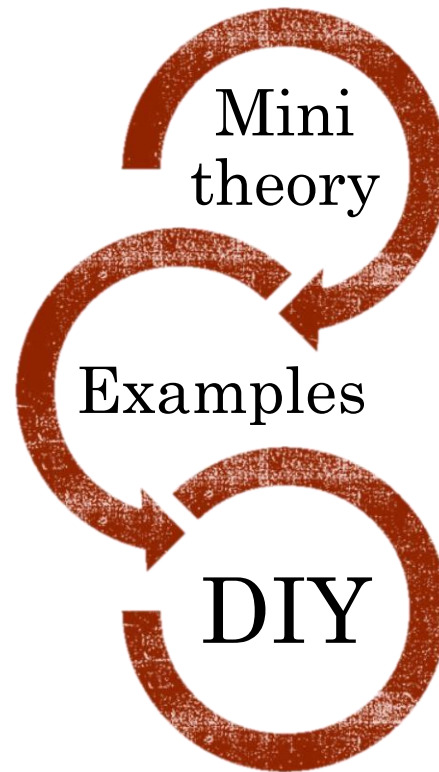
PROJECT RESULTS



Course content:

- Integrated STEM
- STEM Connection
- STEM Exploration & Creation

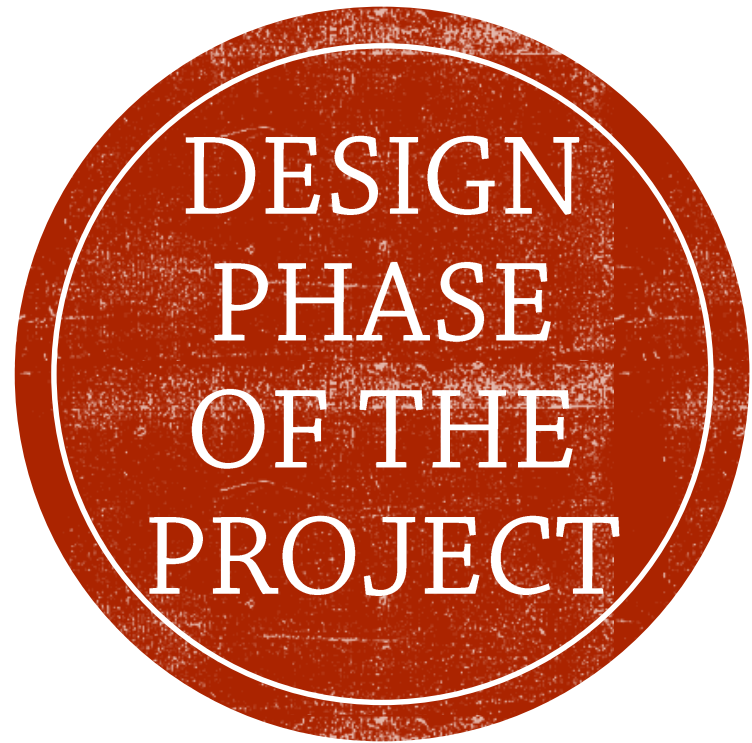
General structure:



Materials developed:

Self-made texts, embedded OER videos, open-access articles and readings, case studies and classroom examples, and discussion forum



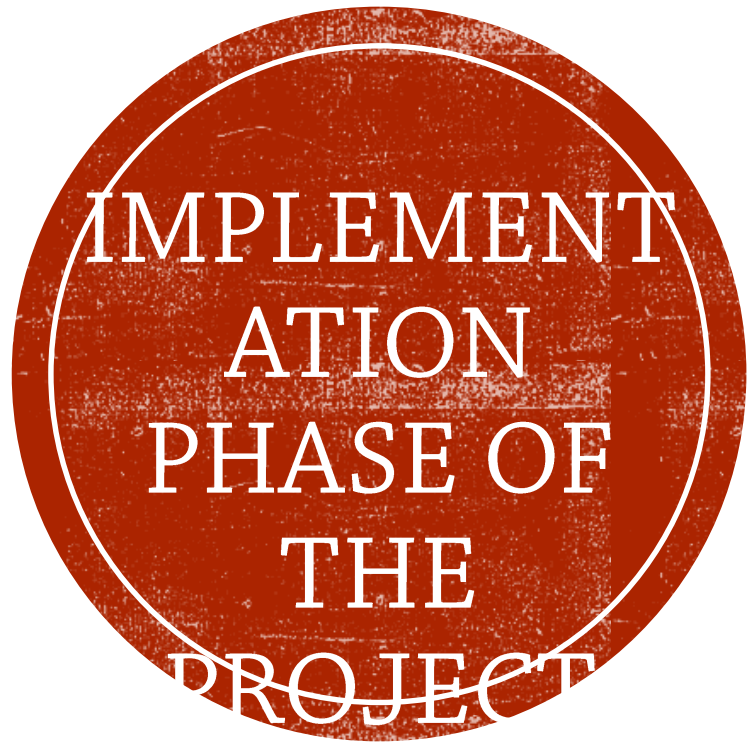


DESIGN
PHASE
OF THE
PROJECT

Discussed with mentors and hub coordinators to *finalize the content*
--- adjusting to the OE4BW program timeline

Created *course framework* and consistent *structure for each module*
--- attention grabber, explanation, examples, discussion, assignment

Explored the *learning resources* available for materials --- OER Commons, other OER repositories, filtered content on Google, YouTube, and Flickr.



IMPLEMENTATION
PHASE OF
THE
PROJECT

- Selecting the Learning Management System (LMS) --- Open Learning and Canvas
- 3 weeks for each module development:
 - ✓ Collecting and curating OERs (videos, images, articles) to be used in the module --- *hardest part!*
 - ✓ Writing the content on Canvas
 - ✓ Setting up discussion forums with engaging probing questions
 - ✓ Creating assignment tasks for learners to practice implementing the lesson
- Continuous reviews and iterations for each module and for the course overall

DEPLOYMENT PHASE OF THE PROJECT

PDF flyer and broadcasted messages of the course were shared to our network of teachers & educators via social media

46 learners registered (from Indonesia, Malaysia, India)
→ 10 active
→ 4 completed

Course was offered from 20/5/2019 to 17/6/2019

Learners took 4-5 hours each week to complete one module

Learners' feedback:

High satisfaction. Course is useful because it provides real classroom examples. Systematic and engaging structure of the course and the materials made them curious at the beginning and keep learning to the end.

LESSON LEARNED

The main challenges:

- Limited OERs available for the content and license compatibility → **made hyperlinks to original sources**
- Delivery language for teachers in rural areas (English may not be suitable) → **offered personal assistances to learners**
- Learners' commitment decreased → **kept the interaction with learners via email, discussion forum, assignment feedback, announcement page. Pay attention to local context situation.**

PLANS AND SUGGESTIONS

- Translate and adapt the course developed into local language and setting (for ex: Indonesian)
- Offer the course to more elementary school teachers --- *demands are on!*

Roles of mentor and OE4BW:

Mentor played the most significant part by providing technical assistance, resources, useful feedback and suggestions, and fruitful discussions.

The OE4BW program played its important part in matching the author and the mentor as well as organizing a design workshop for author to learn more about OER development. However, it would be more beneficial if the workshop is held at the beginning of the program.



What's next?



THANK YOU

Learning is a journey; your journey with this course is ended. However, your journey with your students/children will continue in the next academic year, and so will your ongoing teaching to help a different journey with your students continue in rural areas by applying the best learning experiences you gained from the materials as well as your peers in this course into your brand-new STEM teaching.

Share your experience and keep connect with your new network of STEM teachers and educators from this course. Continuing the best learning experiences for children in your rural areas. Together, let's make Education for All a dream come true!



◀ Previous

Next ▶

