



# Coaching to enhance classroom practices using emergences from Internet-based Technology+STEM

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## → Overview

- ◆ Internet is connectivity, so is learning.
- ◆ Emergence from connectivity is the key!
- ◆ An emergence is a phenomena or a feature in non-linear connected system that resulted from complex interaction inside the connectivity.

## → Aims and Objectives

- ◆ Internet technology emergences with STEM can be applied to enhance classroom practices e.g. flipped classroom, inquiry based, constructivism, etc.

## → Emergence IT for Learning

### ◆ Collaborative Tools

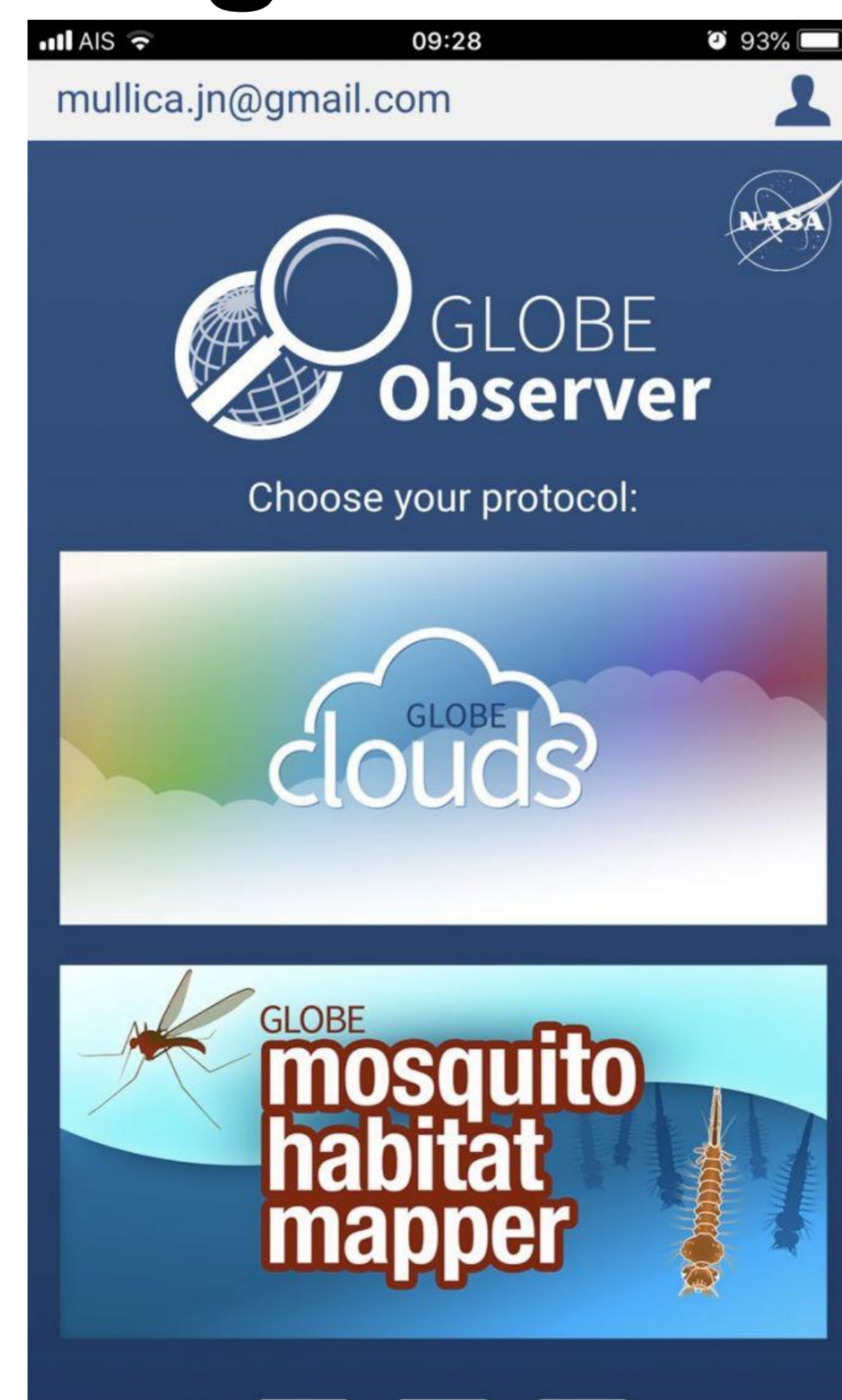
- Collaborative Tools
- Google Classroom
- Google Doc Platform

### ◆ Social Media

- Story Telling - Constructivism
- VR

### ◆ Data Science Tools

- Programming/Coding Tools
- Machine Learning/AI
- Big Data/Voice Recognition



Students using NASA GLOBE App to share their learning globally.

## → Activities - Framework for Coaching other Lecturers

- ◆ GLOBE Program and IPST consultant
  - Master Trainer/Develop New Protocols
    - Marine/Mosquito Protocols
  - GLOBE Technology Working Group
    - 360/VR, IoT, Sensors, ML and AI, Data Science, Web Design
- ◆ Ph.D./M.Sc. Training in Computational Science Graduate Program
  - Many lecturers attended
  - Built into the program
- ◆ Advisory Board of NST Science Center
  - GLOBE trained, IoT/Staff Training, Story telling VDO Clip

## → Reflection and Conclusion

### ◆ Outcomes

- Emergences used.
- Student engaged/learn from others/learning accessible for them 24hr/7day
- Online and offline KM, books, and manuals

### ◆ Impacts

- Our Ph.D. graduates.
- GLOBE Mosquito Habitat Mapper impacts GLOBALLY.
- Oman GLOBE has now implemented RBL/IVSS.
- NSC Channel on YouTube



GLOBE IVSS is a global platform for constructivist learning.

### ◆ Limitations

- Internet connectivity - improving
- Devices - spares for those in needs.
- Some cases take longer time to set in.

## → References

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