JUBLI INTAN

FAKULTI PENDIDIKAN
UNIVERSITI MALAYA

60 years
Anniversary
Faculty of Education
Universiti Malaya
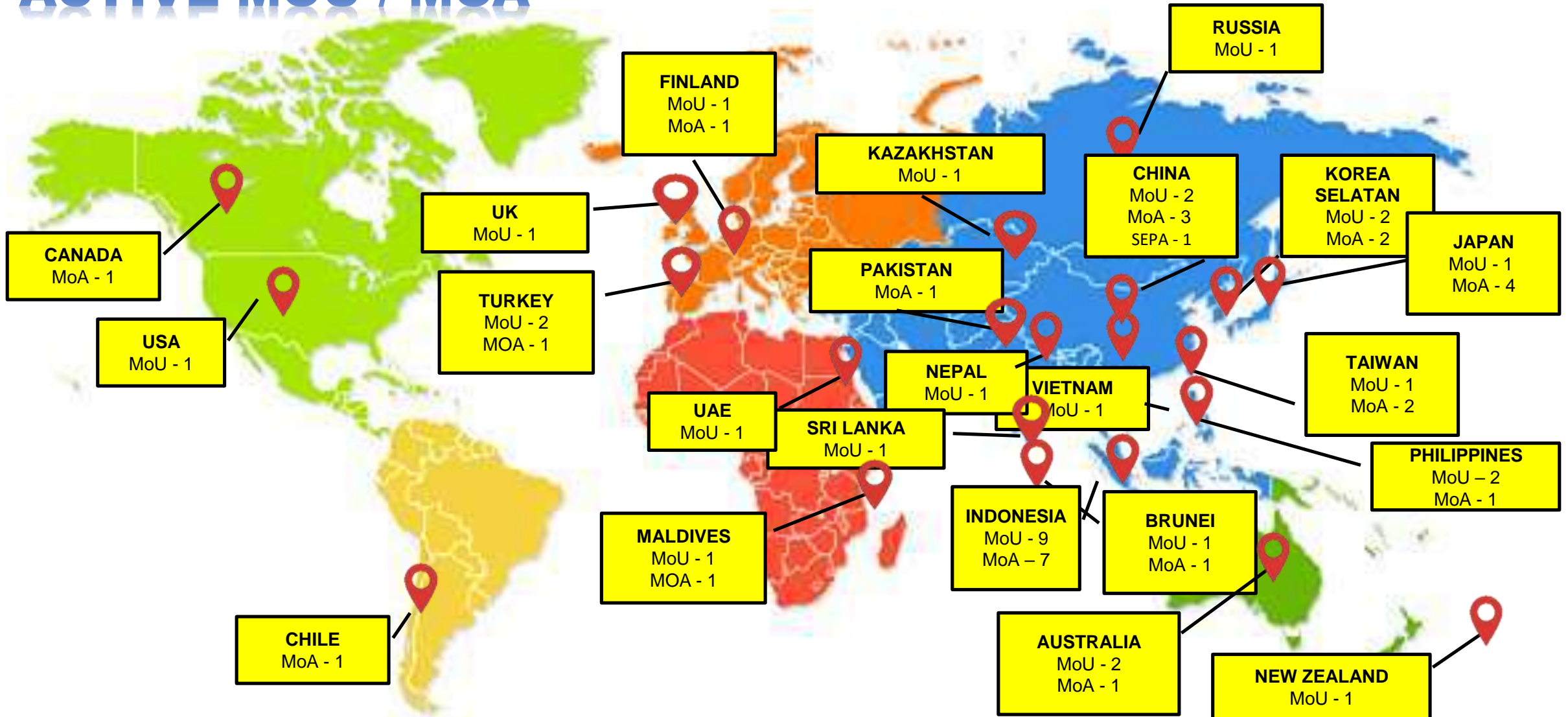
OUR RANKING

QS WORLD UNIVERSITY RANKINGS by subject

EDUCATION & TRAINING

2023 WE ARE #67

ACTIVE MOU / MOA

RUSSIA
MoU - 1

FINLAND
MoU - 1
MoA - 1

KAZAKHSTAN
MoU - 1

CHINA
MoU - 2
MoA - 3
SEPA - 1

KOREA SELATAN
MoU - 2
MoA - 2

JAPAN
MoU - 1
MoA - 4

UK
MoU - 1

CANADA
MoA - 1

PAKISTAN
MoA - 1

TURKEY
MoU - 2
MOA - 1

USA
MoU - 1

TAIWAN
MoU - 1
MoA - 2

UAE
MoU - 1

NEPAL
MoU - 1

VIETNAM
MoU - 1

SRI LANKA
MoU - 1

PHILIPPINES
MoU – 2
MoA - 1

MALDIVES
MoU - 1
MOA - 1

INDONESIA
MoU - 9
MoA – 7

BRUNEI
MoU - 1
MoA - 1

CHILE
MoA - 1

AUSTRALIA
MoU - 2
MoA - 1

NEW ZEALAND
MoU - 1

JOURNALS

Malaysian Online Journal of Educational Management (MOJEM)
mojem.um.edu.my
Indexed in scopus

Malaysian Online Journal of Educational Science (MOJES)
mojes.um.edu.my

International Online Journal of Educational Leadership (IOJEL)
iojel.um.edu.my

Educational Leader
https://ejournal.um.edu.my/index.php/PEMIMPIN/

Online Journal of Islamic Education (O-jIE)
ojie.um.edu.my

Asia Pacific Journal of Curriculum & Teaching (JuKu)
juku.um.edu.my

Malaysian Online Journal of Psychology & Counseling (MOJPC)
mojc.um.edu.my

Journal of Educational Leadership (JuPiDi)
jupidi.um.edu.my

Journal of Issues in Education
https://ejournal.um.edu.my/index.php/JIIE

Journal of Research in Education
https://ejournal.um.edu.my/index.php/JER

Development of STEM Teachers' Conception on STEM Education

Associate Prof. Dr Rose Amnah Abd Rauf
Head
Department of Mathematics & Education
Faculty of Education
Universiti Malaya
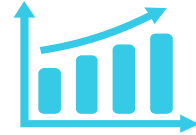
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BACKGROUND OF THE PROGRAM- SEED
(STEM EARLY ENGINEERING DEVELOPMENT)

Training of trainers
For 32 primary science teachers
- Reenginering stem mindset
- Knowledge building
- Coaching & mentoring online
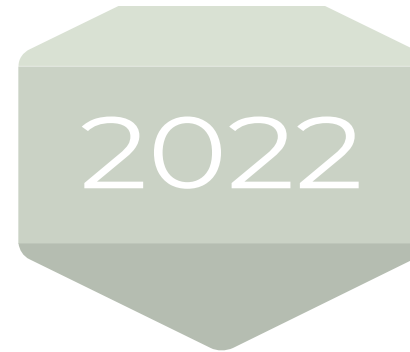- Teaching & learning material innovation competition

Rejuvenating STEM
- Involves 8 district in 1 state
- Develop program framework customize to each district
- Exposure to development of program proposal
- Execution of STEM program at 8 district

Funding:
60,000USD-2020-2022
**15,000USD for 2023**

2020

2021

2022

2023

DEVELOPMENT OF STEM DIGITAL MODULE
- Online knowledge building-VR and AR
- Workshop on development of STEM digital module
- Development of MySTEM application

STEM research & innovation Smart Partnership (SRISP@UM)
- Smart partnership researcher-student-teacher
- Mission-student to nurture interest, teacher- bring activities and experience to school (Nanocat , Tropical Infectious disease, Institute of biological studies

2020
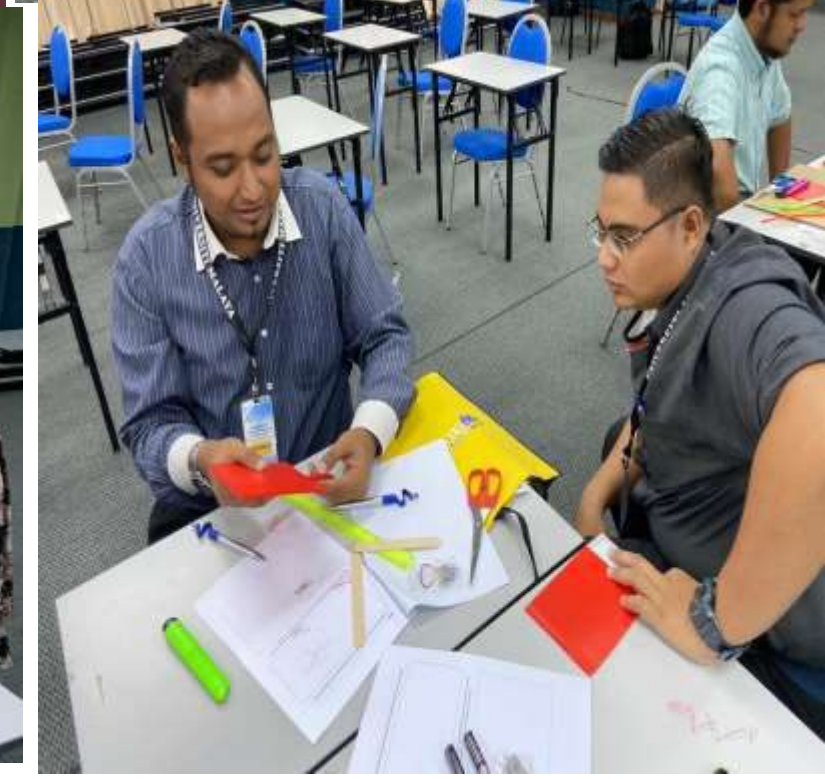
STEM GALLERY

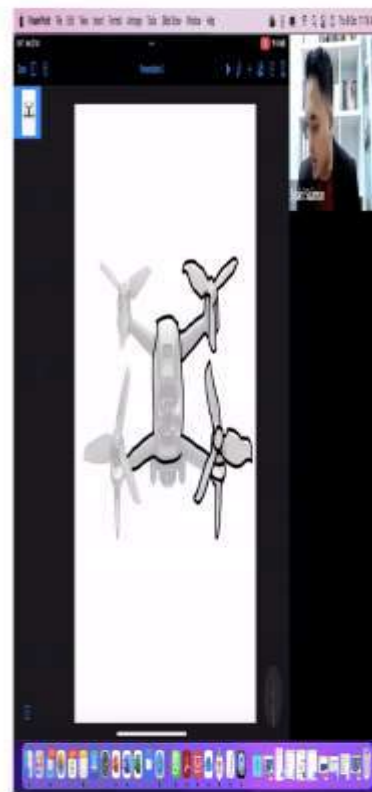## Phase 1: DESIGNIING INTERACTIVE 3D ENVIRONMENTS VR
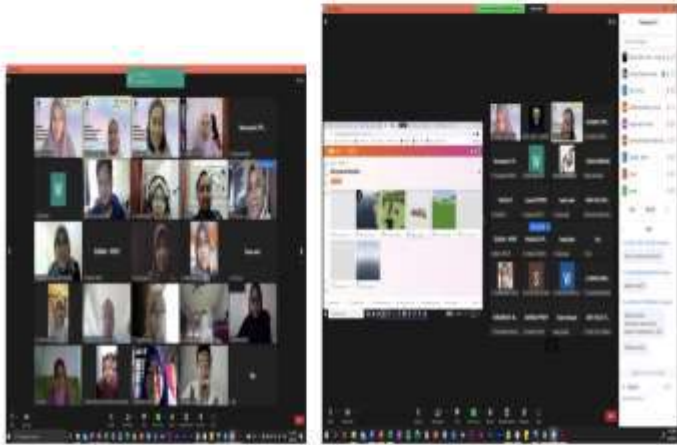
Phase 2: STEM Digital Ideation using Augmented Reality (AR)

2021

MySTEM Apps

Sekolah Rendah

2022
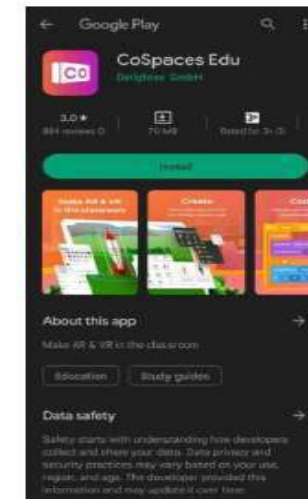
Conception of STEM Education

- Definition
- Execution
- Implication
- Mindset

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Isolated

Same as what they usually do

Nothing special

Same approach

Integrated approach
Training thinking skills
Enhancing psychomotor skills
Nurture interest & motivation

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Materials are mostly reference books, workbook, internet, text book, apparatus
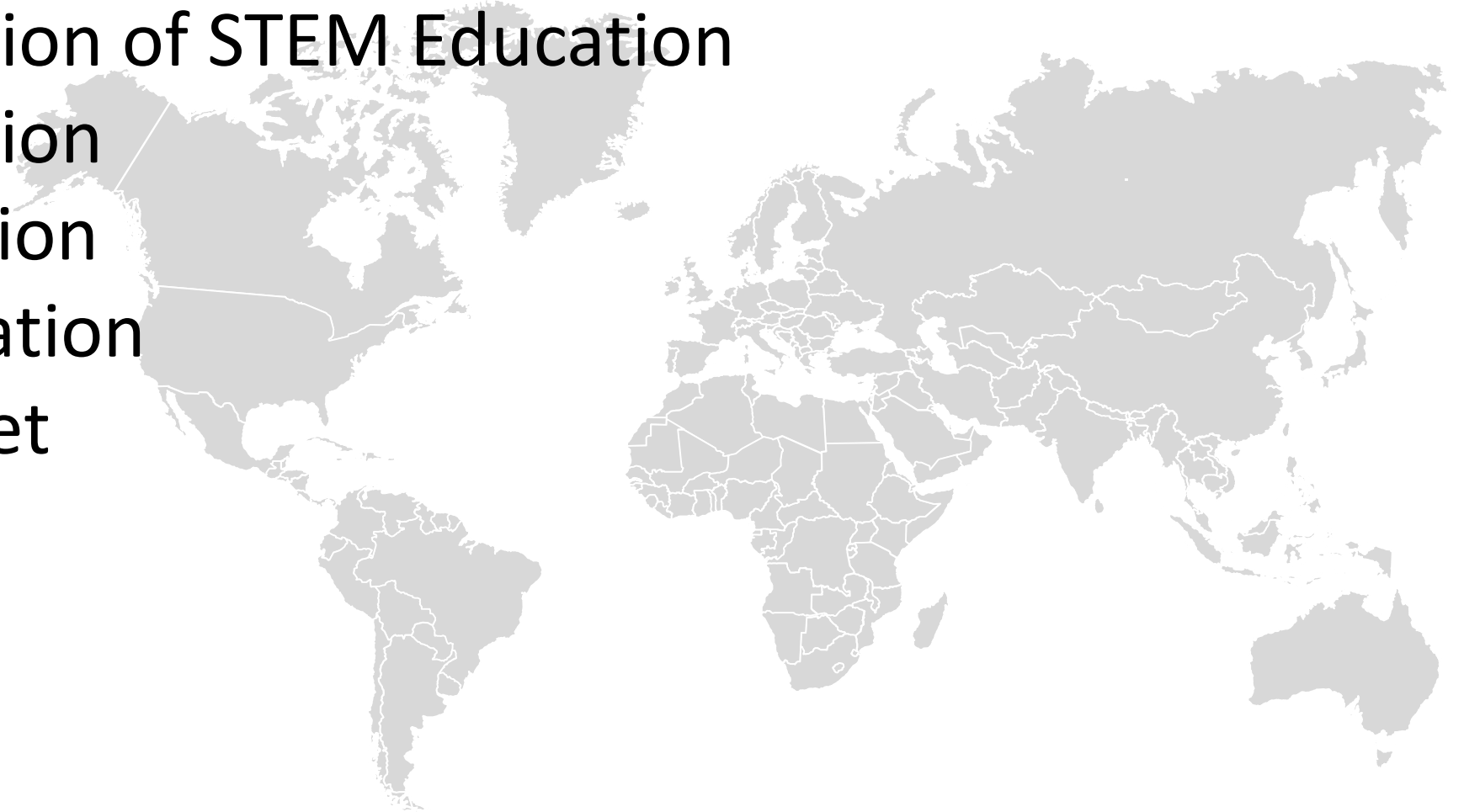
A lot of preparation from teacher, planning very important, activity based, inquiry based, teacher need input, need to be creative

- only in class, hands on mostly doing experiments
- relate with daily life
- Contructivism
- Aim-disseminate knowledge and pass examination

- in class, extra curricular, after school program, out of school program, a lot of hands on, practice the scientific skills,
- facilitating skills important
- based on SDG (real world problem)
- Combination of constructivism and constructionism
- Aim solve problem

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teachers becomes more creative, innovative

- learn new approach
- Always think of application of the curriculum

Confidence in students potential

- Failure is motivation
- Gain self confidence
- Able to relate concepts and application

Teachers need support from stakeholders

- moral
- financially
- resources
- professional development

class become more lively and relevant

- students practice thinking skills
- apply concept learnt
- focus of learning broaden
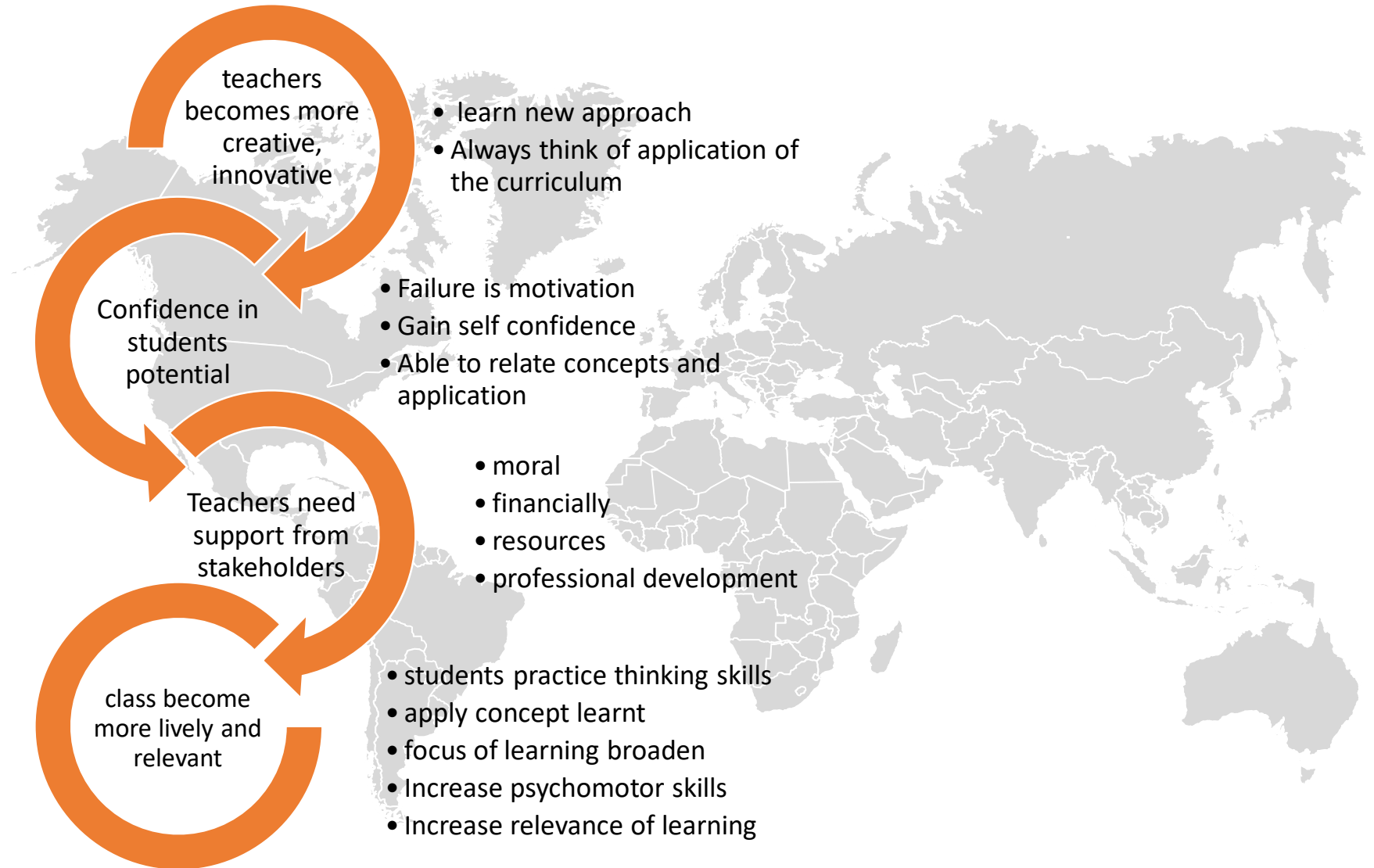- Increase psychomotor skills
- Increase relevance of learning

terima kasih

Thank you

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CONTACT AND VISIT

Education.um.edu.my

www.facebook/education.um.my

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