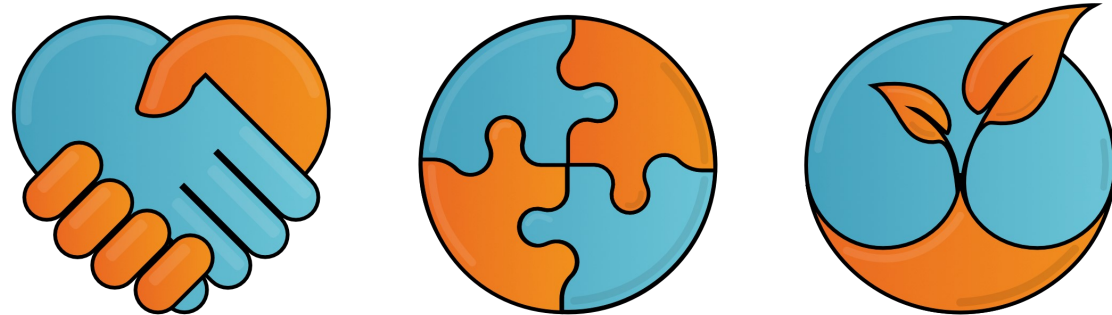


An Introduction to...

ACES



A Community-Centred Educational Model for
Developing Social Resilience through Play

@GCRF_ACES

aces.gchangers.org

#GChangers

Prof. Sylvester Arnab, Coventry University
Project PI

@sarnab75



Our story

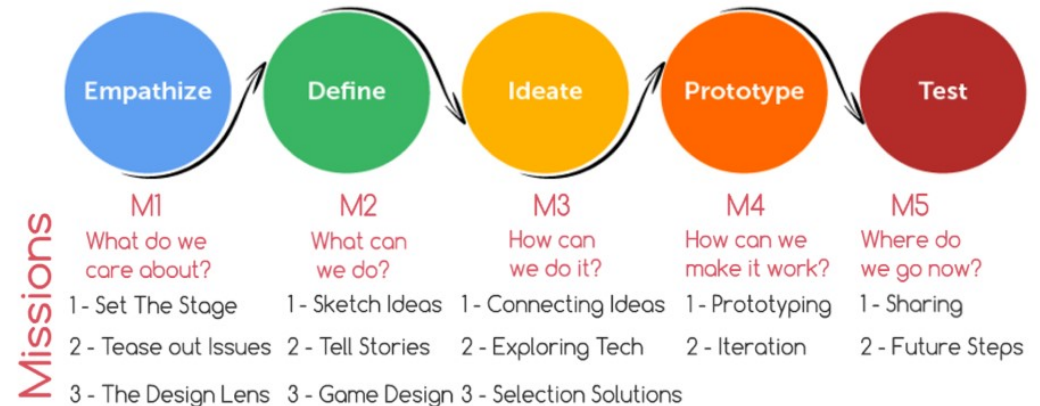


Co-creativity through Playful and Gameful Practices

gamify.org.uk
[#GChangers](https://twitter.com/GChangers)



Game Changers



GAMIFYING EDUCATION

Game changer in the classroom

ZULITA MUSTAFA
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GAMES and play have always been a great stress reliever to many.

But a team of researchers is pushing it a step further by inculcating games and play into the teaching of science, technology, engineering arts and mathematics.

Though the idea may seem too radical to most traditional educationists, a research team in Sarawak is discovering the potential of using games and play in the teaching of the subjects.

Coventry University Disruptive Media Learning Lab Professor Dr Sylvester Annab said teaching should never be rigid and a one-sided communication in order to gauge students' understanding.

"When the teaching method gets dry and rigid, students tend to be bored and lose interest. When this happens, the teacher will have to keep repeating the message to ensure it gets across," said Sylvester.

Coventry University is collaborating with Universiti Malaysia Sarawak in the Creative Culture project, which aims to address educational challenges within the context of inclusive learning for learners from the rural parts of Malaysia Borneo.

The project is funded by the Arts and Humanities Research Council, United Kingdom and Ministry of Higher Education Malaysia under the Newton-Unglu Omar programme.

"Nothing beats hands-on experience and this is proven. Imagine medical doctors going through their studies without any on-the-job training. Or a chemical engineer who does not experiment in the lab and just learns theoretical information from a textbook.

"Physical experience helps students understand better. Now imagine if we incorporate games and play into teaching," added Sylvester.

Some educators in Europe and even in Asia include the use of Lego bricks into their delivery but the Creative Culture project aims to revive traditional games such as congkak, hopscotch, hide and seek, and treasure hunt.

In a recent experiment, the research team held a session at SK Telok Melano in Lundu, Sarawak where teachers and pupils took part in games crafted to teach several subjects including mathematics.

"At first no one wanted to try the math station, because of the natural fear of the subject. But after a while the participants managed to get through the challenge," said Sylvester.



SK Tanjong Datu pupils and teachers learn science and mathematics through games.

arts and culture boost creativity, which leads to innovation.

"It is a new way of thinking and moving beyond existing skills; when combined, they become triggers for innovative thinking, an element much needed for engineering social transformation.

"We need fun, playful, hands-on, socially and culturally grounded explorations of curricular topics in schools to foster contextualised and deeper learning," Mino said.

In Kuching, SMK St Thomas English teacher Adeline Sim said she has been using games in her literature class.

"Games help students understand better. They ignite imagination. The challenge is to keep up with interesting games in class," said Sim.

Another teacher, Chong Chae Hwa, believes one has to be creative in reaching out to students.

"The teacher must first understand the subject. Only then can the teacher craft an interesting game to incorporate into it," said Chong who teaches mathematics.

With the Sarawak government pushing for a digital economy, modern games such as Candy Crush and Angry Birds can also be used in the teaching of STEM subjects.

"Physics can be taught using the Angry Birds game and we can even look into the possibilities of



Teams of lecturers and teachers discussing game design at the Remaking Play workshop.

Recently the Creative Culture Project held the

Creative Culture



Game Changers

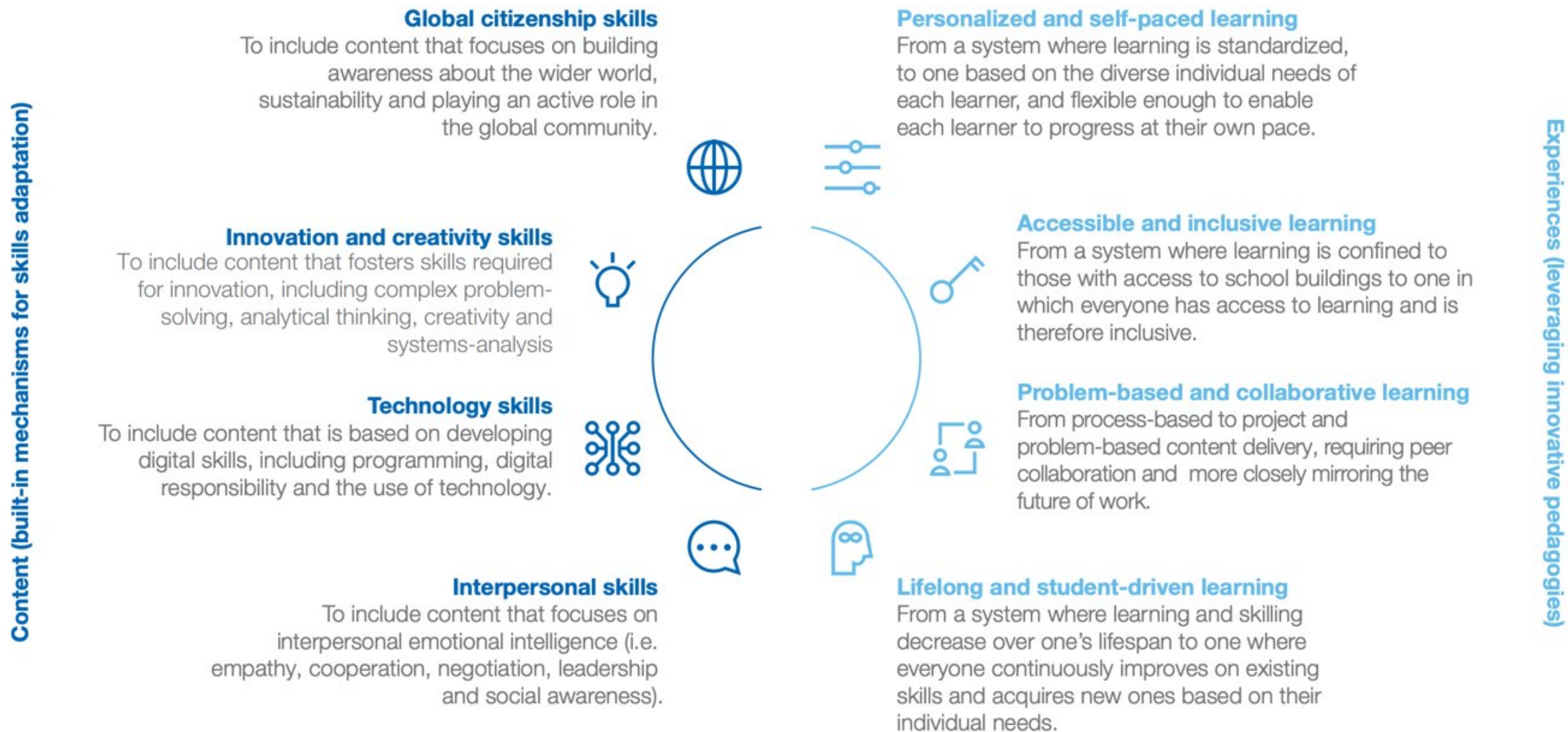


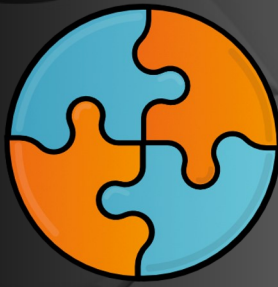
Arts & Humanities
Research Council



KEMENTERIAN PENDIDIKAN TINGGI
MINISTRY OF HIGHER EDUCATION

Figure 2: The World Economic Forum Education 4.0 Framework





ACES

Social Resilience through Play

“to cope with uncertainty: not by striving for control, but by developing resilience, wisdom, creativity, inclusion, diversity...” *Noah W. Sobe, UNESCO*

Futures of Education Ideas LAB

“**Play** is an easy, natural and universal practice that builds resilience” *UNESCO (2019)*

“**Play-based learning** is an evidence-based and universal pathway to building resilience in children...” *UNESCO (2019)*

ACES to investigate **transformative educational model** for **developing Social Resilience through Play**



Community

Collaborative and inclusive
through emphatic
participatory approaches



Playful

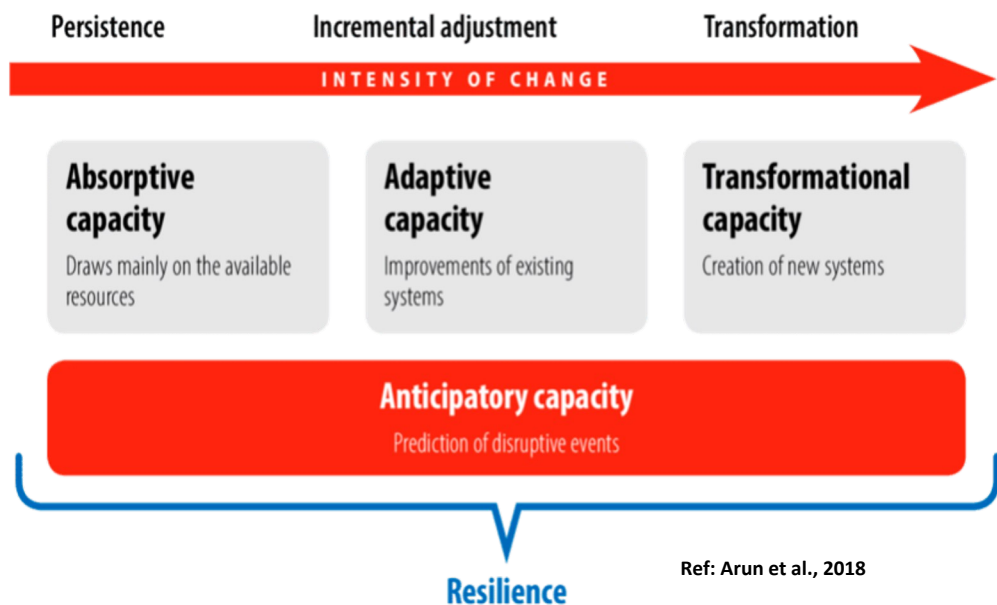
Experiential learning
through playful pedagogy
and frugal education



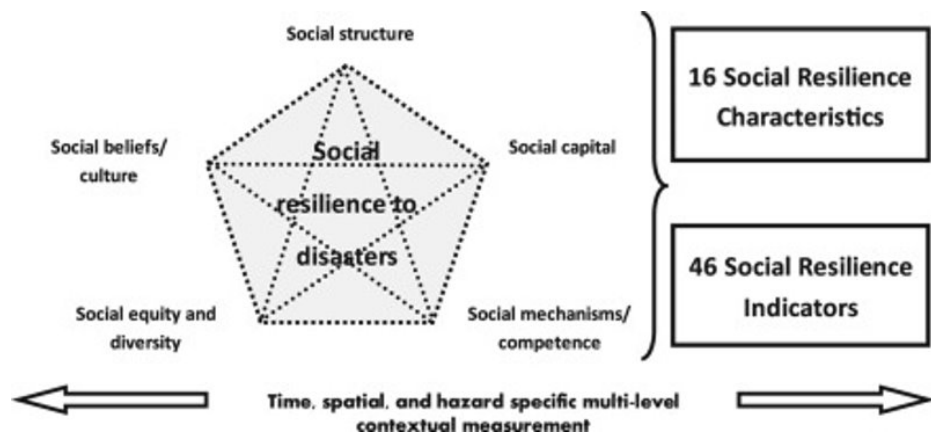
Resilience

Adaptable and persistence
through transformative
experiences and growth

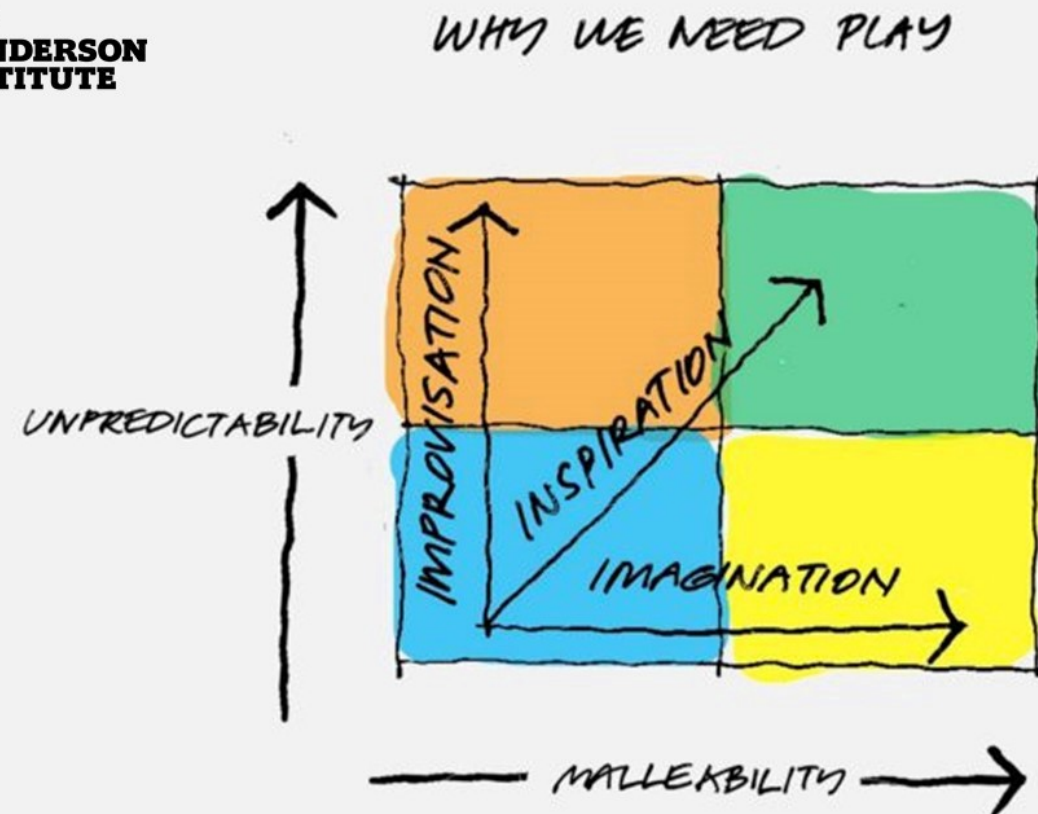
What is the **transformation pathway** towards **social resilience** through **play**?



Ref: Arun et al., 2018



Ref: Saja et al., 2019



Sources: Henderson (1970), Lockridge (1981), Nadler & Tushman (1994, 1995), Abell (1999), Willbank et al. (2006) and Reeves et al. (2011, 2012, 2015).

Jacob, Arun & Nakhooda, Smita & Tiwari, Bishwa & Rankine, Hitomi & Beerepoot, Milou & Lisa Dacanay, Marie & Jiwaji, Moortaza & Kharrazi, Ali & Hee Kim, Seung & Lee, Alice & O'Connell, Deborah & Schandl, Heinz & Varma, Anshuman & Yutong, Li. (2018). Transformation towards sustainable and resilient societies in Asia and the Pacific. 10.22617/TCS189274-2.

Towards mapping Resilience Dimensions against Playful Pedagogies



Table 1. Five sub-dimensions of social resilience in the ‘5S’ model framework

Sub-dimension	Description (adapted from Cox and Hamlen [18] and Sharifi [11])
Social structure	Key social segments such as social demography, gender, and family structure; socio-economic stratification; and functions of the people in a community.
Social capital	Social bonds within socioeconomic groups based on association of families and locality; networking abilities made up of economic and other ties that are external to the group; Interaction between social groups/networks with the governing authorities/local institutions.
Social mechanisms /competence /values	Mechanisms include developing community goals and priorities; engagement and competence of the community in the resilience building process; collective attitude and shared values towards coping and adapting to disasters.
Social equity and diversity	Equal access to diverse set of resources, skills, and services; process of inclusive resilience initiatives; ensuring equity for people with specific needs to manage disasters.
Social beliefs /culture/faith	Social behaviours/local cultural beliefs and norms; faith based values and practices

Ref: Saja et al., 2019



Degree of adaptiveness to unpredictability

Intensity of malleability

Rate of social innovation and enabling features

Behavioural change mechanisms & link to social responsiveness

Scope for Improvisation, Inspiration and Imagination



SUSTAINABLE DEVELOPMENT GOALS



Southeast Asia

Co-production and Co-creation

DISRUPTIVE
MEDIA
LEARNING

LAB

Coventry
University



Research Centre
Postdigital Cultures

Coventry
University



Research Centre
Global Learning:
Education and Attainment

Coventry
University



International Centre for
Transformational Entrepreneurship

Coventry
University



TRƯỜNG ĐẠI HỌC BÁCH KHOA HÀ NỘI
HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY


UNIMAS
UNIVERSITI MALAYSIA SARAWAK



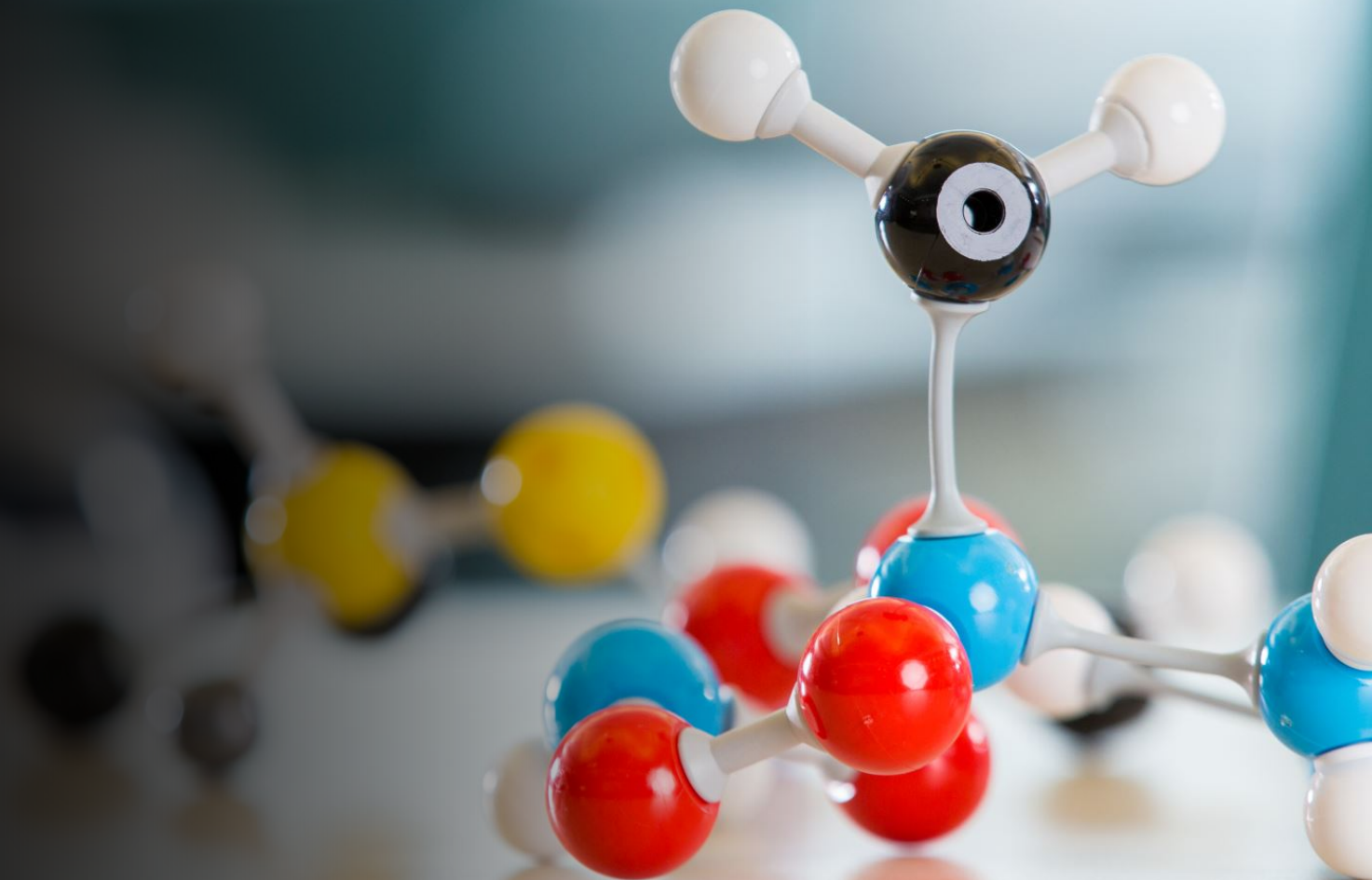
UNIVERSITAS
MUHAMMADIYAH
PONOROGO



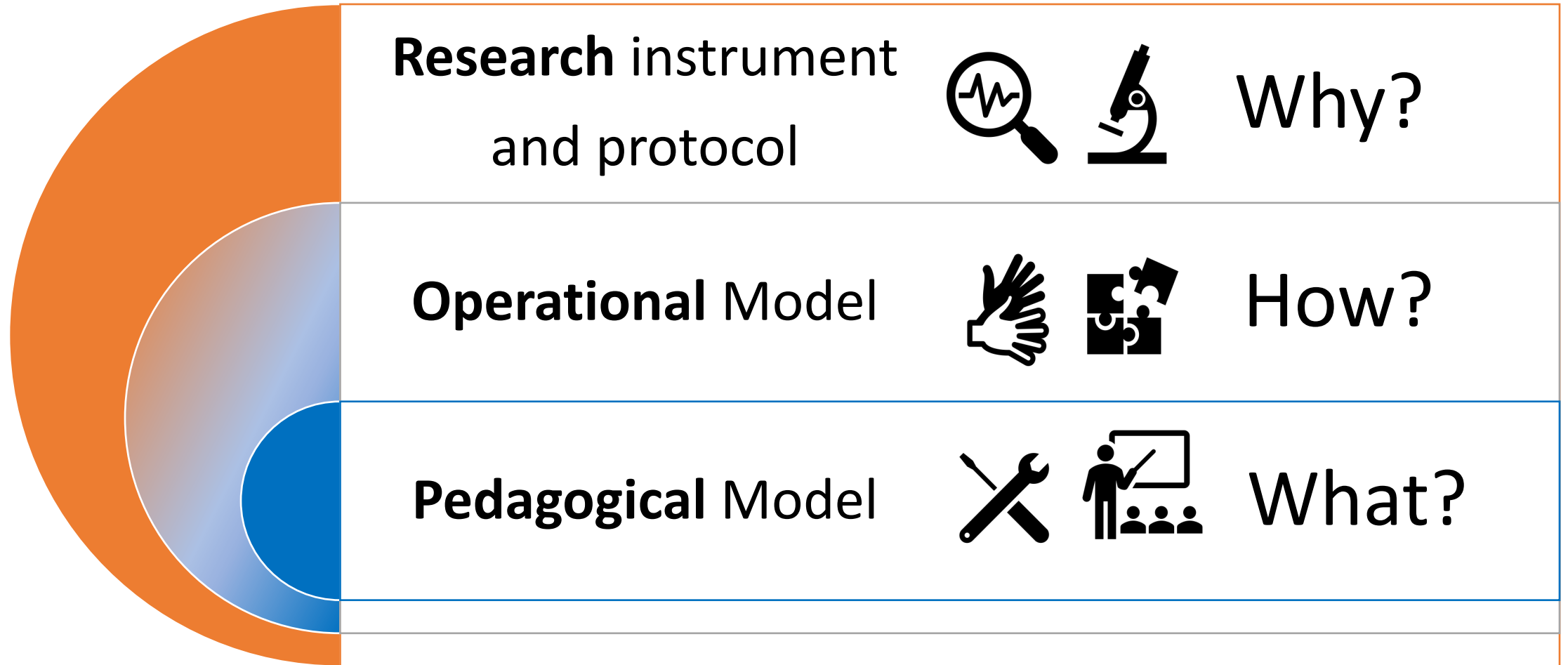
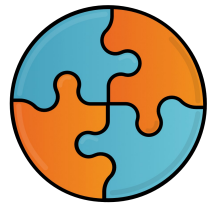


The ACES Model

What, How, and Why



Dimensions of the ACES Model



Developing **Pathway** to **Impact**



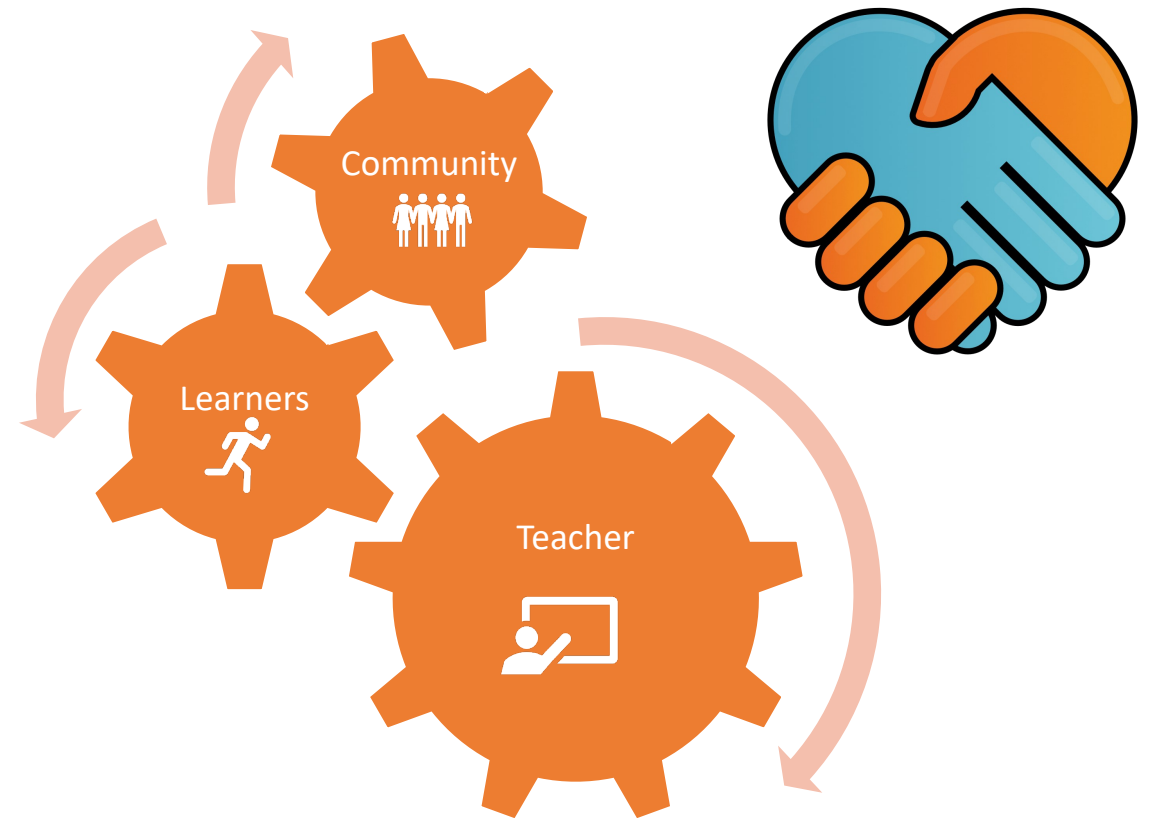
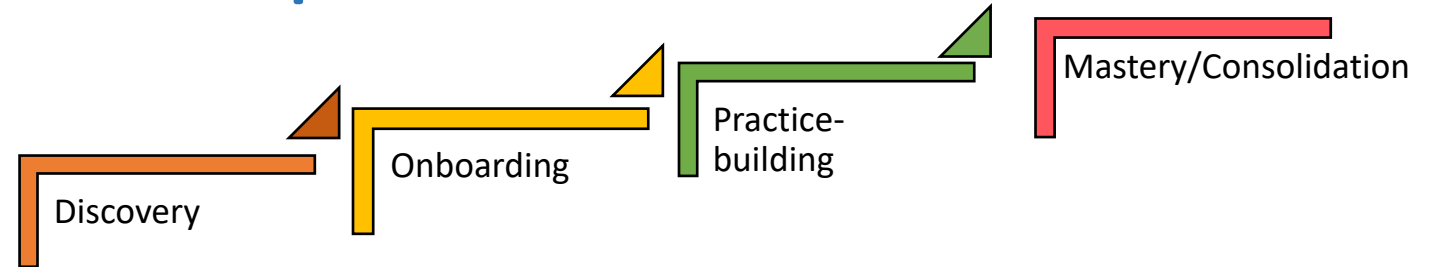
TEACHER
PATHWAY



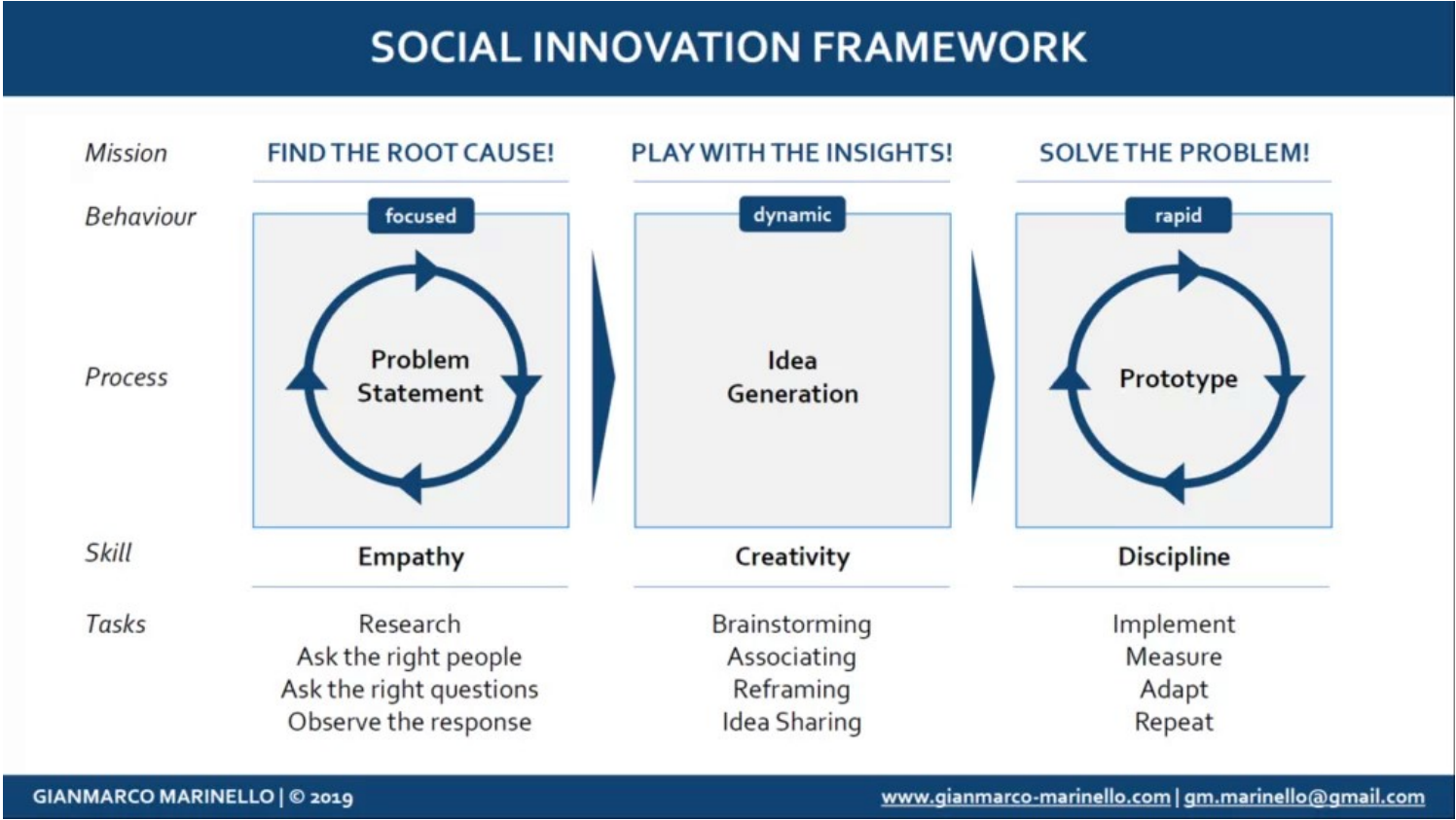
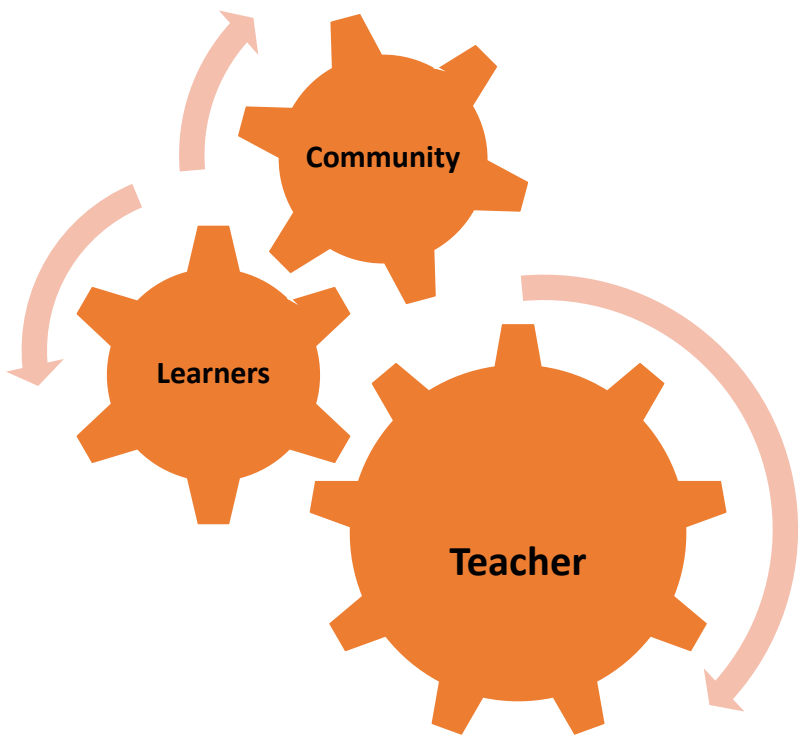
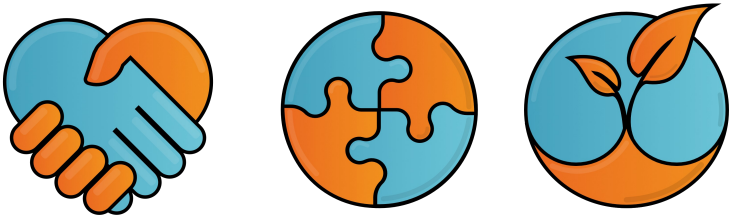
LEARNERS
PATHWAY



COMMUNITY
PATHWAY



Framing the activities – Social Innovation

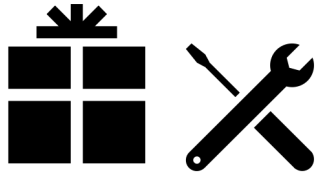
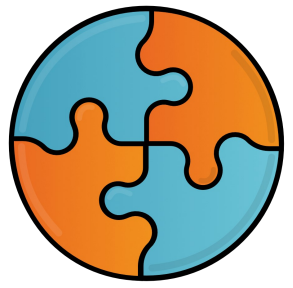




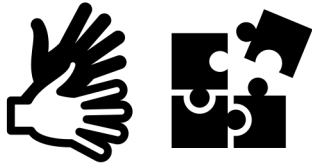
...in order to **mobilise young people,**
we need the upskilling of school teachers...
...one of the **most effective** and
direct means of
achieving all of the **SDG4 targets...**
(UNESCO, 2017)



“Lab” programme and open resources to be developed



Toolbox for teachers and champions e.g. templates, examples, playlists, OERs, etc.



Hands-on playful activities



Context of deployment (formal or informal) e.g. classroom, youth club, community space, etc.

“Lab” setup – fixed, pop-up, mobile, online...

E.g. CreativeCulture **Fixed Lab** in Malaysia



E.g. **Pop-Up** playful lab space

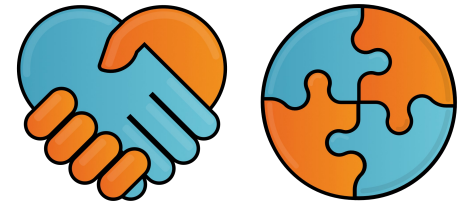


E.g. GameChangers **Mobile lab** for touring sites

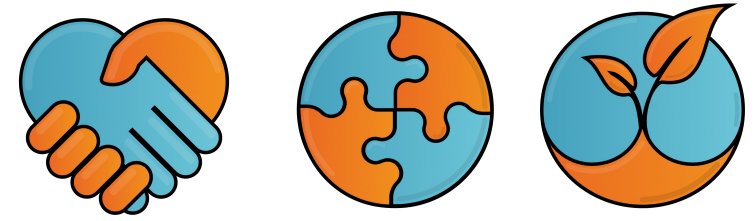


Game Changers goes on tour!

20th to 23rd
March



ACES will produce



**ADAPTABLE EDUCATIONAL
MODEL (WITH BLUEPRINTS AND
OERS)**

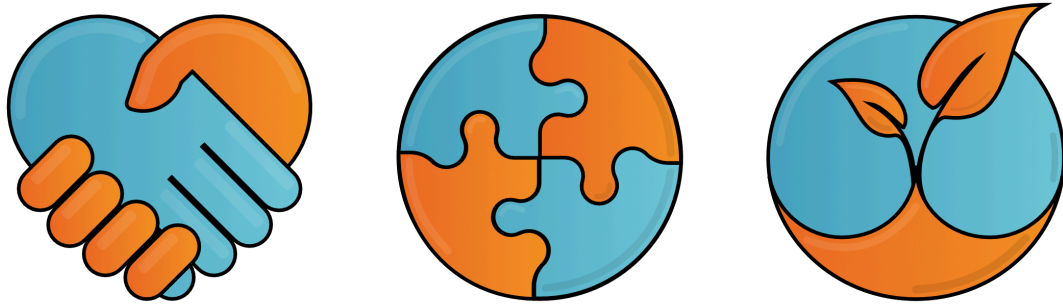


**PRACTICE
RECOMMENDATIONS**



**POLICY
RECOMMENDATIONS**

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Thank You

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