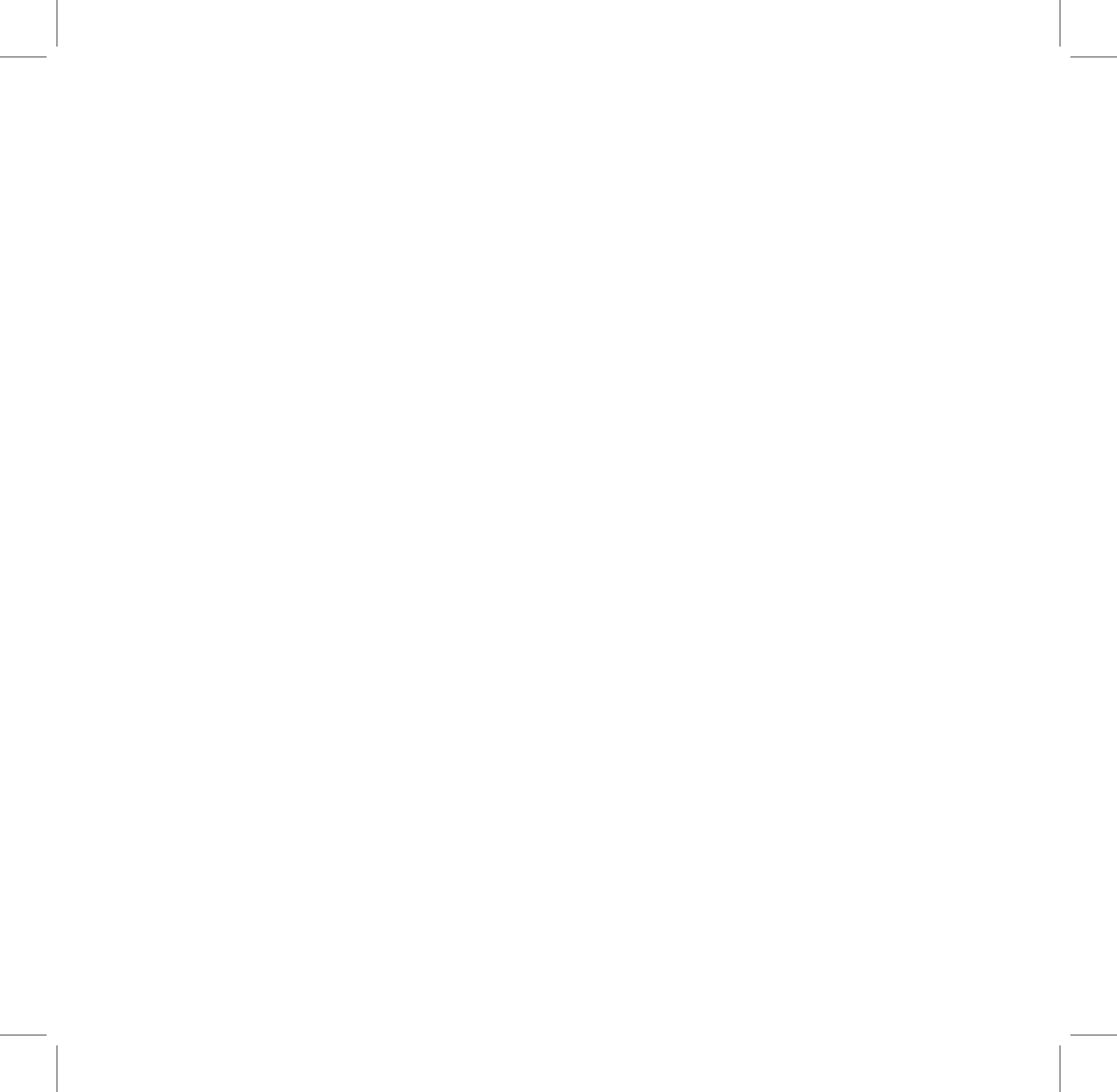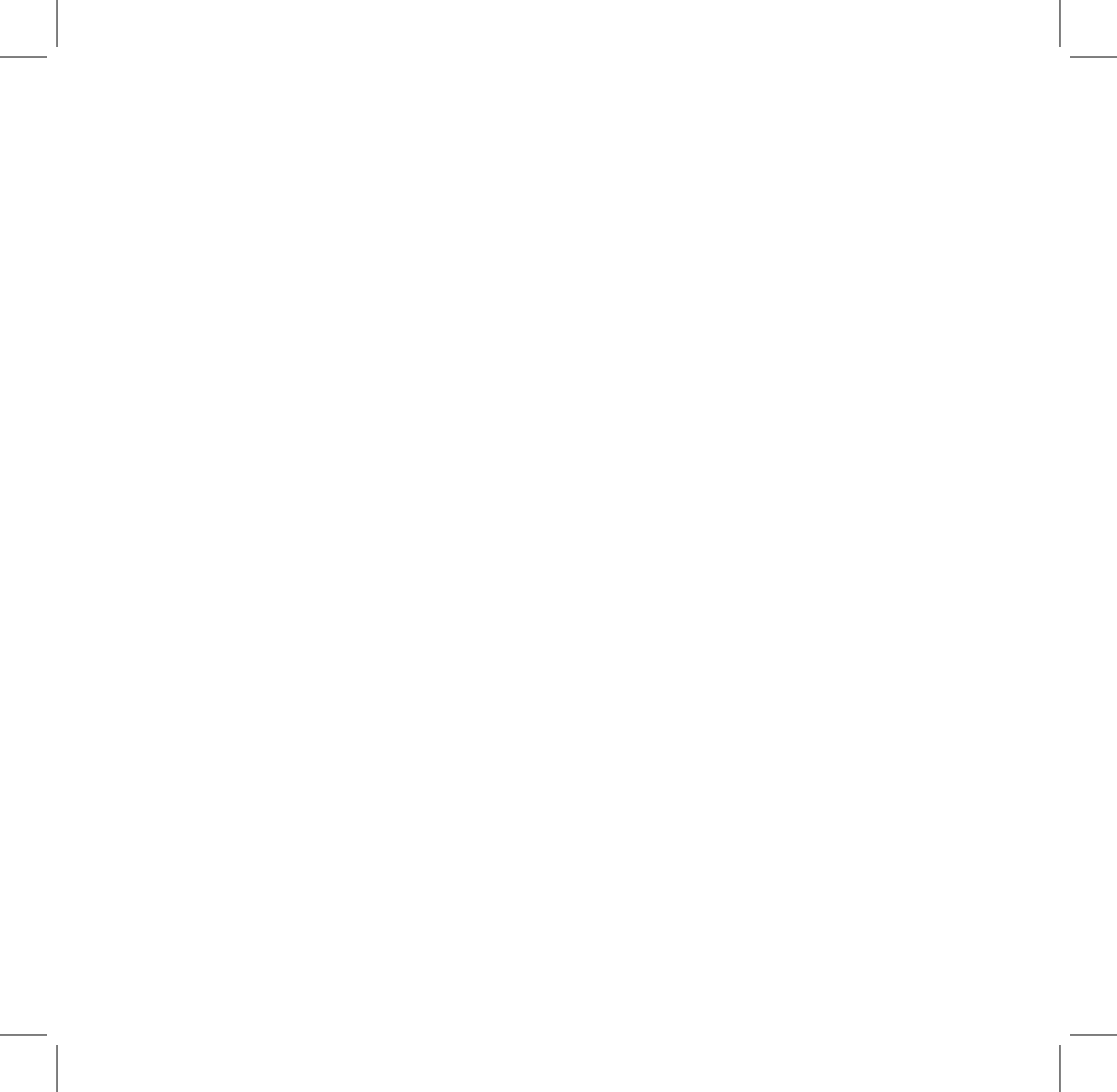# THE ACES CHARTER

**A Community-Centred Educational Model
for Developing Social Resilience Through Play**

"Play is an easy, natural and universal practice that builds resilience"

UNESCO (2019)

PARTNERS, SUPPORTERS, AND ACKNOWLEDGEMENTS

THE ACES CHARTER
A Community-Centred Educational Model
for Developing Social Resilience Through Play

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@GCRF_ACES
@GChangers

PREFACE

This charter presents the insights from the ACES project, which is an international research project entitled "A Community-Centred Educational Model for Developing Social Resilience", funded by the UKRI-Economic and Social Research Council (ESRC) under the Global Challenges Research Fund (GCRF). From 2020 to early 2023, the project examined the benefits of using playful, frugal, and co-creative approaches to education in order to develop individual, community, and institutional resilience in Indonesia, Malaysia, and Vietnam.

The project aligns with the United Nations' Sustainable Development Goal of providing equitable, inclusive quality education through the investigations into experiential, co-creative, and participatory activities that are informed by frugal education principles to achieve sustainability. Through a community-centred approach, young people have been developing non-discipline specific capabilities that will help them become active lifelong learners and contributors to their communities. Educators, whether formal or informal, and local community groups have been involved in the project to draw on local knowledge and experience and to encourage co-creation and ownership of the educational process, resources, and spaces by the community.

This charter shares the collective learning from the ACES project and proposes the ACES values for developing and implementing meaningful formal and informal educational resources and spaces towards an inclusive, safe, and resilient society.

CONTENTS

RESILIENCE
ABSORPTIVE, ADAPTIVE, TRANSFORMATIVE

The concept of resilience pertains to the capacity of people or groups to anticipate, cope with, and recover from difficult situations or change. Through the examination of various examples in ACES, resilience is perceived as the willingness and readiness to be innovative and exploratory in facing not just problems, but also seizing opportunities to foster adaptability and transformation of oneself, practices, and surroundings to meet educational and community needs. Resilience can be examined at the level of a community, group, or individual. It is not just a final outcome, but rather a process that can evolve over time. It requires acknowledging that individuals and communities are not solely responsible for resilience and that other factors, such as education policy, resources, and space, also play a role.

The COVID-19 pandemic has reinforced the perception of the importance of resilience from the absorptive, adaptive, and transformative perspectives.

- Absorptive resilience is demonstrated by individuals and communities who deal with external pressures and challenges without breaking down.
- Adaptive resilience refers to the ability to adapt to changing conditions and circumstances.
- Transformative resilience is the capability to undergo a fundamental change in response to difficult situations or change, and even to opportunities.

In ACES, resilience is also demonstrated as the ability of educators and learners to adapt to the sudden shift to online learning and to find ways to continue providing and receiving meaningful education despite the challenges presented by the digital divide and varying levels of digital literacy. This includes finding creative and experimental approaches to adapting and transforming teaching and learning, such as using playful and frugal methods and resources, and being open to exploring new ways of delivering education.

PART 1
ACES PRINCIPLES

Four key principles of community, playfulness, frugality, and co-creation underpin the ACES model. Each principle encapsulates of a set of values that are essential for informing and guiding the design, development, and deployment of educational interventions.

FOUR KEY PRINCIPLES OF ACES

01. Community-centred values for collective action.

02. Playful values for fostering intrinsic motivation and meaningful engagement.

03. Frugal values for creative, practical, and sustainable design.

04. Co-creation values for equitable problem solving.

01
COMMUNITY

The community refers to a group of individuals who share common interests or causes and are seeking to bring about educational change. It is crucial to recognise the specific needs of the relevant community, such as formal and informal educator communities, as well as minority and marginalised communities. Creating optimal conditions for active engagement within the community towards a common goal should be built on a foundation of trust.

02
PLAYFUL

Play and playfulness promote the sense of autonomy, curiosity, and agency of learners to experiment, whilst engaging with fun challenges and social interactivity. These values, among others, represent the interrelating characteristics that are often demonstrated in playful learning.

03
FRUGAL

Adopting a frugal approach to education design encourages creative problem-solving, practicality, and sustainability towards more resilient education practice. Design with an open mind, leverage available resources, and build interventions at the speed of need by embracing critical values.

04
CO-CREATION

Adopt a collective approach to the generation of artefacts, experiences, questions, and solutions. Involve a range and diversity of voices and perspectives to ensure that whatever is generated will represent different members of the community.

PART 1: PRINCIPLES
OVERVIEW

01: COMMUNITY

The community refers to a group of individuals who share common interests or causes and are seeking to bring about educational change. It is crucial to recognise the specific needs of the relevant community, such as formal and informal educator communities, as well as minority and marginalised communities. Creating optimal conditions for active engagement within the community towards a common goal should be built on a foundation of trust.

Community-Centred
Gathering a range of stakeholders together to draw upon their collective knowledge and experience to extend the co-creation and ownership of the educational process within the community.

Trustworthy
Building trust takes time as the community learns to listen, respond, reflect, and persist together, and through clear channels of communication.

Shared Ownership
Shared ownership of the issue(s) amongst community participants including, shared analysis; shared decision making (deliberation, tasks, roles); shared action and reflection for collective meaning making (sense making).

Welcoming
Acknowledging and listening to all voices. Establishing open and welcoming spaces for deliberation, critique, and reflection through empathy, generosity, and a willingness to reconsider (one's) long-standing beliefs. Appreciating how care and support for one another builds a sense of belonging, which contributes to community resilience.

Incorporating these community centred values in the design and delivery of playful learning and teaching, can help community participants meaningfully engage in collective action and take ownership as agents of change.

02: PLAYFUL

Play and playfulness promote the sense of autonomy, curiosity, and agency of learners to experiment, whilst engaging with fun challenges and social interactivity. The following values, among others, represent the interrelating characteristics that are often demonstrated in playful learning.

Autonomy
Encourage the ability to take control and make decisions in the learning process. Activities, resources, or spaces allows for the freedom to explore the challenges and opportunities associated with them.

Fun
Facilitate engaging experiences and affective participation through 'easy' and 'hard' fun. Easy fun is often associated with fantasy and imagination through engaging stories and gameplay. Hard fun links to our need to improve our abilities, often when tackling a challenge.

Agency
Encourage learners to respond to and act on challenges or opportunities during the learning process. Learners can take charge, making choices about what they do and how.

Curiosity
Instil the sense of wonder and the need to explore and investigate. Encourage the need to know, the need to feel, and the need to value during the activity.

Experimental
By repeatedly attempting an activity/task, multiple solutions and consequences can be explored and reflected on. Hypothesis testing can occur to discover different alternatives.

Social
Social interaction is key to learning. Learners become more informed, gaining a wider perspective, and capable of making better decisions when engaging with others.

By considering and incorporating these values in the design and delivery of learning and teaching, engaging, motivating, and meaningful context for educational activities, spaces, and resources for learners to engage with can be created.

03: FRUGAL

Adopting a frugal approach to education design encourages creative problem-solving, practicality, and sustainability towards more resilient education practice. Design with an open mind, leverage available resources, and build interventions at the speed of need by embracing the following values:

Creativity
Foster experimentation, creative thinking, and problem-solving to combine ideas from different disciplines in innovative ways.

Collaboration
Take an empathic approach to learning design by including the target audience in the design process and work together to co-create your designs.

Openness
Share your designs within the public domain, enabling others to adopt and remix your ideas into their own practice.

Resourcefulness
Take advantage of available materials, repurpose trailing-edge technologies, and reuse existing resources in new and novel ways.

Practicality
Identify the right tools for the job. Consider the practicality, cost, and accessibility of materials and resources.

Resilience
Equip your learning designs with the flexibility to adapt gracefully in response to unforeseen circumstances and environmental changes.

Minimalism
Keep it Simple. The less complicated your design is, the easier it will be to build, deliver, and manage.

Sustainability
Design with sustainability in mind to deliver environmentally responsible education practice, both locally and globally.

Iteration
Start small and iterate often, through a continuous cycle of rapid prototyping, testing, and refinement.

04: CO-CREATION

Adopt a collective approach to the generation of artefacts, experiences, questions, and solutions. Involve a range and diversity of voices and perspectives to ensure that whatever is generated will represent different members of the community.

Co-creation is Diverse
There can be no one-size-fits-all recipe and its practices can go from full-on structured co-design, to contributing insights, to contextualising, to remixing, appropriating, and subverting. Even saying "I don't want to play this" should be counted!

Joint Ownership
Everyone involved can define and steer the purpose, shape, and dissemination of what is being co-created.

Collective Reflection and Participation
Especially when it comes to playful learning, co-creators build spaces and artefacts, and players then create the new learning experiences by participating in them. This participation should be reflected upon and documented.

Process Focus
Trust the process and experience of co-creation. This is even more important than its outcomes, as it fosters flexible attitudes and capabilities that can go beyond any specific output.

Surprise Each Other
The creative collective is more than the sum of its parts and might come up with creations that no single individual could have conceptualised. Embrace that!

PART 2
INSIGHTS

From building trust and mobilising communities through to project development and communication of impact, we have compiled a collection of lessons learned throughout the ACES project. These valuable insights can be used to inform your own community-centred educational interventions.

6 KEY INSIGHTS FROM ACES

01. Anchor Institutions

02. Change Agents

03. Space

04. Resource

05. Keeping Track

06. Sustainable Practice.

01
ANCHOR INSTITUTIONS

The ACES project has focused on ways in which universities can leverage resources to support playful and frugal approaches to education.

02
CHANGE AGENTS

The ACES project has highlighted the role of educators not only as transmitters of knowledge to passive receivers, but rather as powerful agents of societal change that are already deeply embedded in communities, and best positioned to understand local issues and mobilise other actors around them.

03
SPACE

The ACES project highlights the importance of playful and frugal approaches to education and the benefits of co-creation in designing spaces that meet the needs and interests of the community. ACES approaches space as context-driven environments that provide opportunity and safe spaces for teachers and young people to be creative, experimental, and imaginative. They are either physical or digital.

04
RESOURCES

The ACES project promotes playful, frugal, and co-creative values in educational resource development and in the learning activities enabled by the resources.

05
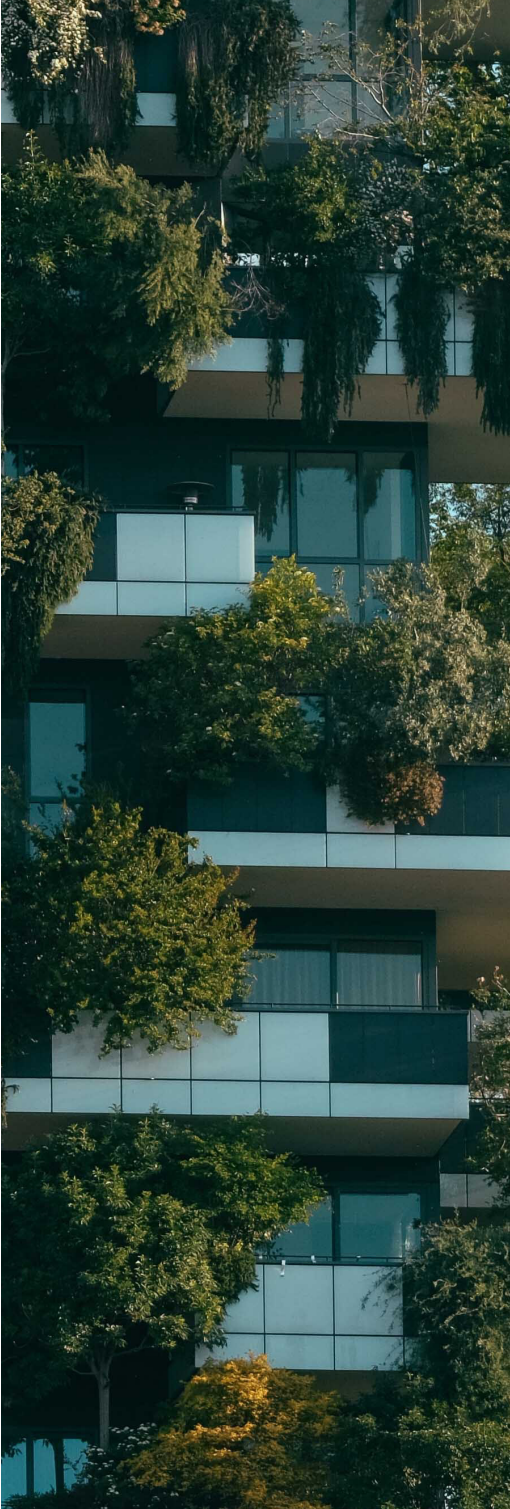# KEEPING TRACK

The ACES project adopts theory of change (TOC) with participatory action research (PAR) as the key mechanism to facilitate ways to track/map any progress. This approach, including reflection for action, in action, and on action with key stakeholders has led to collective knowledge development about resilience capacity and ownership of the educational process within the community.

06
SUSTAINABLE

Sustainable practice requires developing approaches which are flexible enough to be adapted yet rigid enough to be consistent through different iterations. This has been made clear through the case studies that informed this model.

PART 2: INSIGHTS
OVERVIEW

01: ANCHOR INSTITUTIONS

The ACES project has focused on ways in which universities can leverage resources to support playful and frugal approaches to education.

Mobilising Community Support
Recognise the unique capabilities and knowledge that community members bring through co-creation and shared ownership as this motivates the community to engage and ultimately produces better results. When community stakeholders contribute their time, finance, and labour in the co-design and co-construction of activities, their actions, and behaviours inspire further mobilisation of community support.

Trust
In order to address problems meaningfully, trust between the university and community is essential. Although the university's reputation is key, trust cannot be built when the university dictates the relationship. Time, the nurturing of relationships, and two-way communication are essential.

Engaging a Range of Stakeholders
As wide a range of stakeholders should be engaged. This takes time and requires actively seeking potentially impacted community members.

Social Responsibility
Recognize the importance of the values and mindsets required for university-community partnerships. Work with, not for communities.

Co-Create
Research and embrace new approaches to data collection - Work with the community to understand the local context and collect a wide range of longitudinal and cross-sectional data through a multi-method approach. Surveys, interviews, focus groups, observations, film, photography, and case studies can be analysed collectively to provide valuable insights and understand the impact of any educational change.

Communicating Impact
A range of techniques across university and community settings should be explored to best accommodate the nature of the community. This cannot be achieved without developing effective communication strategies.

Engaging Policy Makers at the Outset
Policy change can take time. Focus on ways to build relationships with policy makers early in your project. Identify the forms of verifications required to generate support towards influencing strategy, developing practice guidelines, and determining the resources that you can leverage.

02: CHANGE AGENTS

The ACES project has highlighted the role of educators not only as transmitters of knowledge to passive receivers, but rather as powerful agents of societal change that are already deeply embedded in communities, and best positioned to understand local issues and mobilise other actors around them.

"Educator" Can Mean Many Things
It is important to acknowledge an educator does not just mean a teacher – but rather educators can be academics, NGOs workers, volunteers, community leaders, parents, even the children themselves – anyone involved in building an education intervention, however indirectly. This shifts the emphasis from formal, one-way, passive ways of learning to collective learning and change.

Community Brokers
When trying to ground one's work in community needs and perceptions, educators (in their many forms discussed above) are a privileged and powerful point of entry, exploration, and negotiation.

Play is a Language for Change
When trying to open spaces to imagine, discuss and articulate perspectives of change, play and its universal nature can work for educators as a powerful language working across generations, cultures, and stakeholders both within and beyond the community.

Autonomy and Ownership
To be able to make change, educators and other stakeholders need to have their autonomy and competences recognised, respected, and valued. Often directions of change are imposed from above or outside, and therefore fail to leverage the opportunities that come from supporting bottom-up educational initiatives.

Mobilising Youth
Educators can be critical front liners for mobilizing young people, and actively link them to both local and global concerns.

03: SPACE

The ACES project highlights the importance of playful and frugal approaches to education and the benefits of co-creation in designing spaces that meet the needs and interests of the community. ACES approaches space as context-driven environments that provide opportunity and safe spaces for teachers and young people to be creative, experimental, and imaginative. They are either physical or digital.

Context-Driven
Don't let the space define the context, let the context define the space. Design for adaptability and flexibility, allowing for the needs and interests of the community to shape and influence their content and use.

Opportunity Space
Providing permission to play has enabled educators to experiment new ways to deliver content, design learning resources, and facilitate active learning in formal and informal settings. Learners can experience new ways of learning that are more active and playful.

Safe Space
Allowing educators and learners to be curious and experimental is important for recognising that learning is iterative and incremental. Give permission to mistakes and learn through trial and error. Trust is also essential for creating a level playing field. Breaking down barriers.

Physical Space
Playful and frugal spaces should not only be functional, but also afford creativity and innovation. These spaces should allow for the needs and interests of the community to shape and influence the space. Focus on sustainability, ensuring that the spaces are built with materials and methods that are environmentally friendly and efficient.

Improvised Space
Leverage ad hoc spaces, both within your institutions and communities, that encourage collaboration and dialogue. These spaces can facilitate the delivery of workshops that welcome local organisations and community members into your activities. This will foster inclusivity and participation in the creation and design of projects.

Digital Space
Host and provide access to resources and activities remotely (synchronously and asynchronously). Use webinars, tutorials, and templates for facilitating co-creation and applications of playful activities.

04: RESOURCES

The ACES project promotes playful, frugal, and co/creative values in educational resource development and in the learning activities enabled by the resources.

Modular
Design learning resources to be flexible and adaptable, so they can be used in a variety of settings and with students of different skill levels. They can include loose pieces consisting of a variety of materials that require students to explore, build, and experiment with different concepts in a hands-on, interactive way.

Open Educational Practice
Design open educational resources (OERs) that are easy to reproduce and replicate, with comprehensive guidance and instructions for use, that will enable other educators to adopt your resources within their own educational practice.

Reuse and Repurpose
Take advantage of existing materials and OERs to create new sustainable resources. Combine and recycle what is available to design practically and environmentally sustainable practices.

Embed in Curriculum
Educators play an important role in the adoption and effective use of playful approaches. Adoption of playful learning resources can be encouraged if educators are able to create and co-create resources that can be embedded within their existing teaching practice.

Map Playful Values to Learning Objectives
Design and create playful learning resources that are engaging and interactive while still aligning with specific educational goals.

Encourage Reflection
Encourage learners to reflect on their learning experiences and the skills they have developed through playful activities that involve self-evaluation and self-assessment.

Prototype and Test
Test the functionality and usability of learning resources and gather feedback from educators and learners for ensuring fit-for-purpose.

PART 2: INSIGHTS
OVERVIEW

05: KEEPING TRACK

The ACES project adopts theory of change (TOC) with participatory action research (PAR) as the key mechanism to facilitate ways to track/map any progress. This approach, including reflection for action, in action, and on action with key stakeholders has led to collective knowledge development about resilience capacity and ownership of the educational process within the community.

PAR
The embedded PAR used throughout ACES has facilitated collective action and meaning-making rooted in community centred values.

Relevance to the Community
PAR is embedded in a TOC approach through community centred values for collective action, with the production of knowledge and action being directly useful to the community. Resilience capacity can be strengthened by theory of change process.

Co-Creation in Learning
ACES confirms that front loading training or theory in isolation from stakeholder involvement will not result in sustained change in practice.

Negotiation of Learning with the Community
Careful consideration of what knowledge can best support quality learning experiences, and how best to facilitate learning needs to occur and be negotiated with the community.

Flexibility and Responsiveness
ACES has an important agency lens which is not about presenting a given tightly bound structure but rather a set of principles and values as a process for expanding people's / community choices with scope for creativity acknowledging there is not a 'one-size-fits-all' solution.

Absorptive, Adaptive and Transformative
Developing resilience involves overlapping approaches that allow communities to respond to challenges with interventions that combine absorbing, adapting, and transforming as required.

06: SUSTAINABLE

Sustainable practice requires developing approaches which are flexible enough to be adapted yet rigid enough to be consistent through different iterations. This has been made clear through the case studies that informed this model. The following elements can foster this type of practice:

Resourceful Practices
Flexible and adaptable education design is key to deploying activities in remote locations, allowing educators and communities to leverage available materials and resources that can be found within the local environment.

Keep it Simple
Try to subtract what is not essential to your practice. The simpler the design, the easier it will be to resource and deliver. The simpler the solution, easier it will be to sustain practice in the long term.

Unintended Consequences
Be conscious of the environmental impact of your design. Identify and address any negative second-order effects that may arise from the creation and delivery of your design.

Inclusive Participation
Including the community as co-designers and co-developers fosters active participation. Encouraging collective investment in the continued success of the project.

Resilient Design
Designing with resilience in mind will enable your project to be adapted or repurposed in response to environmental changes and/or new use cases.

Shared Ownership
Establishing collective ownership of projects will ensure sustainability over the long term as responsibility for the project's success will be shared by the community it serves.

Sustainable Relationships
Building trust within the community you are engaging will foster long term engagement with your project and help build a sustainable relationship with stakeholders.
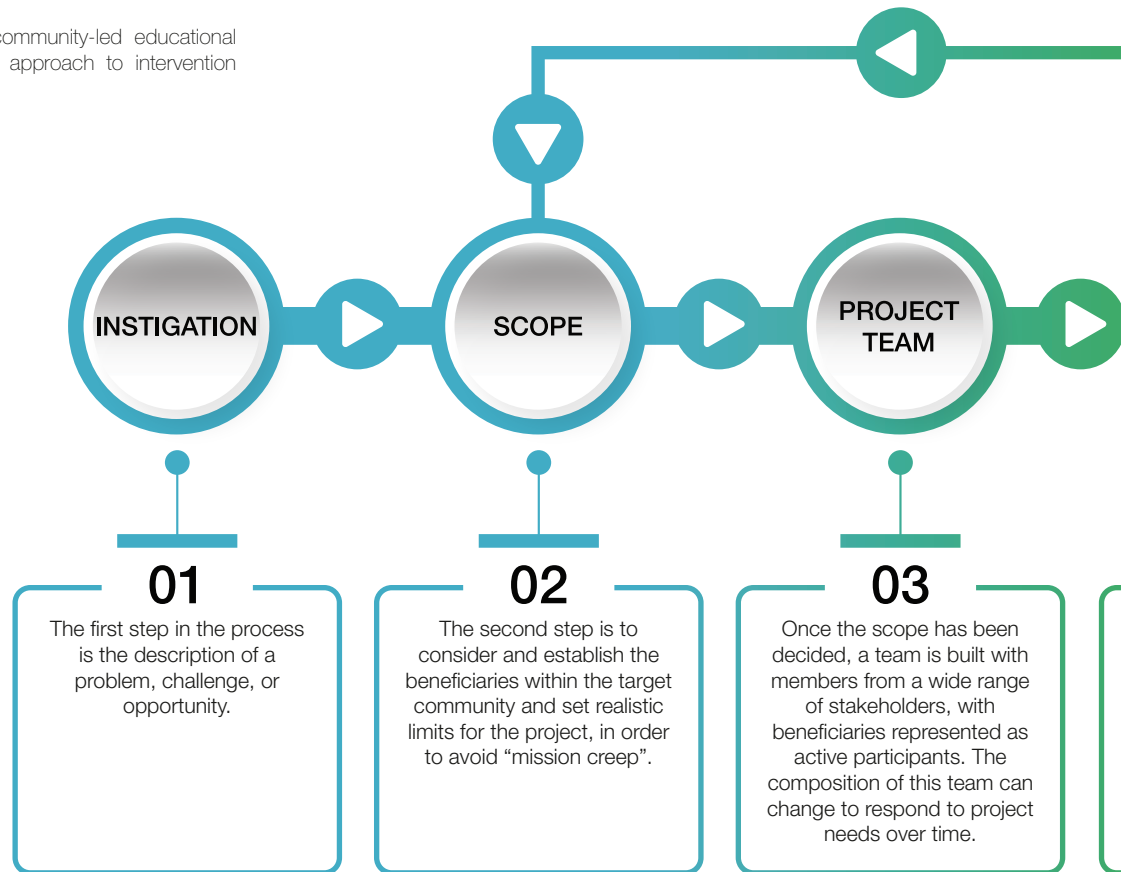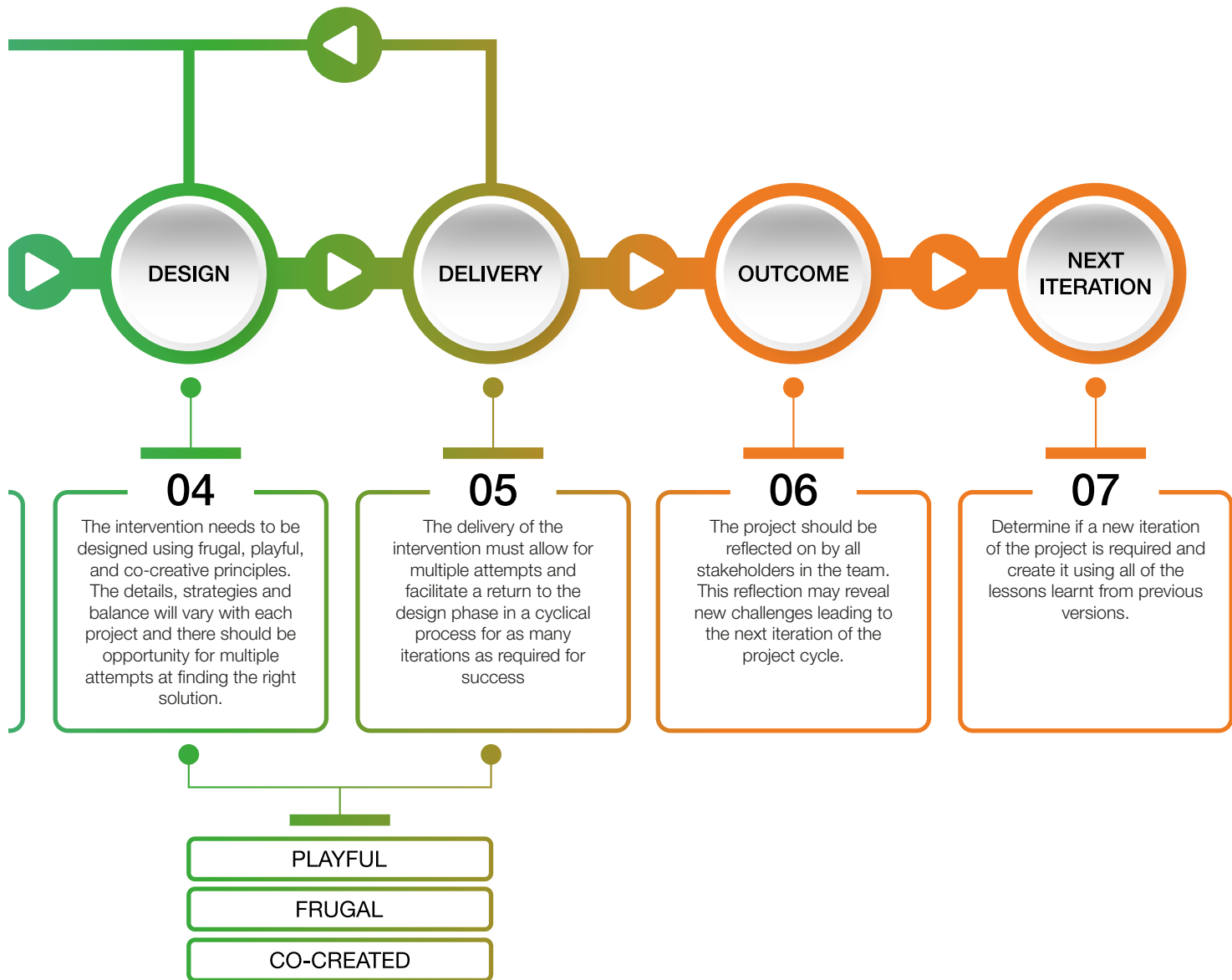
PART 3
THE ACES PROCESS

The ACES process is a recipe for community-led educational development through a project-based approach to intervention design.

INSTIGATION

SCOPE

PROJECT TEAM

01

The first step in the process is the description of a problem, challenge, or opportunity.

02

The second step is to consider and establish the beneficiaries within the target community and set realistic limits for the project, in order to avoid "mission creep".

03

Once the scope has been decided, a team is built with members from a wide range of stakeholders, with beneficiaries represented as active participants. The composition of this team can change to respond to project needs over time.

DESIGN → **DELIVERY** → **OUTCOME** → **NEXT ITERATION**

04

The intervention needs to be designed using frugal, playful, and co-creative principles. The details, strategies and balance will vary with each project and there should be opportunity for multiple attempts at finding the right solution.

05

The delivery of the intervention must allow for multiple attempts and facilitate a return to the design phase in a cyclical process for as many iterations as required for success

06

The project should be reflected on by all stakeholders in the team. This reflection may reveal new challenges leading to the next iteration of the project cycle.

07

Determine if a new iteration of the project is required and create it using all of the lessons learnt from previous versions.

PLAYFUL

FRUGAL

CO-CREATED

PART 4
CASE STUDY SUMMARIES

View all of the case studies
online by scanning
the QR Code.

MALAYSIA

ACES Malaysia through the CreativeCulture initiative is focused on advancing agentic practice and empowerment through inclusive learning to build resilience using a playful approach and frugal resources.

The ACES STEMBucket programme has been co-developed and established for enabling students, youths, parents, and teachers to make every day STEM projects more interesting, engaging, and sustainable. Through STEMBucket, educators can create lesson plans and activities that could improve STEM skills, conduct research, participate in design and innovation activities, create new products, and spark inventions. The programme embeds playful, frugal, and co-creative values in its approaches to enhance exploratory learning competencies such as reskilling and upskilling, as well as other critical aspects such as motivation, efficacy, inner values, and empathy. As part of the STEMBucket programme, the PlayLab bus, which is an invention platform developed by ACES Malaysia, enables inventors from various schools and industries to discuss their ground-breaking use cases for achieving self-sustainability. ACES Malaysia's goal is to give students a learning environment that fosters their creativity and curiosity.

The STEMBucket initiative has involved and impacted over 50 schools and more than 40 online and offline events with industries, NGOs, universities, government education departments and institutions, and locals, having more than 8,000 participants. The entire collection of STEMBucket resources, including a set of toolkit and activity book and cards, has been published. The Sustainable Development Goals (SDGs), which were the focus of the project and the case study, were utilised as a conceptual framework to onboard our communities into discover their sense of ownership and responsibility in developing their practice towards resilience, obtain and experience relevant skills, and engage in lifelong learning in order to address local concerns with global relevance.

INDONESIA

Playful approaches included the use of gamification in certain classroom activities such as an augmented reality app for teaching Biology and the adaptation of traditional games to encourage face to face interaction, communication, and problem-solving skills. There was a particular focus on STEM education with the STEM bucket activities which encouraged experimentation with everyday objects, and which became the inspiration for an international STEM learning competition. Frugal approaches were key and aimed to address both the needs of the local communities and address the UN SDGs. Issues including recycling, water purification, and environmental mindfulness were woven into learning activities and were often the focus of the playful, practical, and experimental learning approach embraced throughout the project.

Co-creation was essential for the success of the projects undertaken by ACES Indonesia. We worked with a range of stakeholders including the Solo Mengajar NGO, a community of young volunteers in Solo, Central Java; the Rumah Harapan NGO, which works with disabled craft makers in Ponorogo; and many local schools, universities, and local government officials, including the mayor of Solo. These collaborations served to disseminate playful and frugal principles in the non-formal education sector in several villages and learning parks which improved children's social resilience, particularly those with learning difficulties. They also equipped the disabled adult population of remote settlements in Central Java with the capabilities to market their craft products online. ACES Indonesia has been able to respond to the requirements of Indonesian education policy and develop practical learning resources for use throughout the country.

VIETNAM

ACES Vietnam created a community-centred educational model for developing social resilience in response to curriculum transformation in Vietnam. It used playful and frugal aspects in formal and informal education via co-designing and evaluation activities. Using the Participatory Action Research approach, ACES Vietnam successfully engaged with stakeholders:

- Experts and researchers from Hanoi University of Science and Technology (HUST) and Vietnam National University, Hanoi;

- Institutional leaders, teachers, teacher students, teacher trainers and school students from Hoa Binh College of Education and Nguyen Tat Thanh School;

- Policy makers and community members (parents, local authorities in Hoa Binh Province);

- Other NGOs and charities

The community co-created a Playful School Model, with three overarching case studies: (i) The Green Playground as a playful learning space; (ii) Frugal Stem; and (iii) Empowering the youth with awareness of local contexts, focusing on the promotion of Muong ethnic language, culture and socio-economic features.

We apply three major principles throughout the project. Specifically:

- Playful aspects via Gamification, Traditional/Muong Games, Experiential Learning through play, Project-based learning, Problem-based learning and Playground-based activities.

- Frugal aspects via Frugal Stem activities/toolkits for teaching and learning, utilisation of local resources/materials and recycling – reusing designs.

- Co-creation via the engagement of ACES team members, teachers and students, teacher trainers, facilitators, NGOs and local stakeholders.

The playground embodies a hybrid pedagogical approach, providing both students and teachers with a Playful-Frugal learning space and addressing the Social Development Goals. Teachers' have engaged in pedagogical transformation, evidenced by their active engagement in cascade training, Hackathons and the STEMBucket challenge. The partnership between universities as anchor institutions, local authorities and teachers as change agents in the community demonstrates the model can be successfully applied in similar contexts, responding to curriculum transformation and social resilience.

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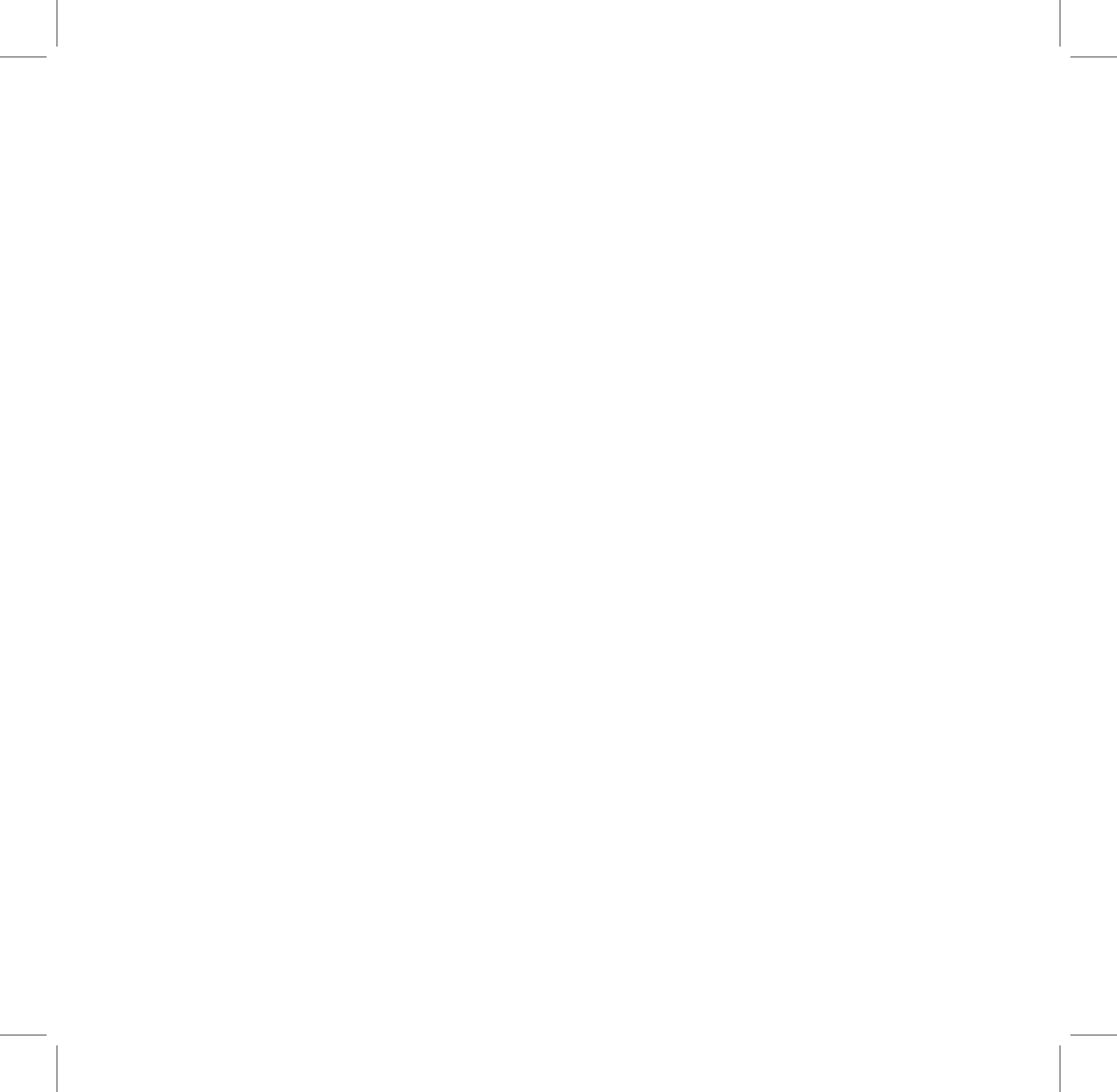Page 35 - CC BY CreativeCulture, UNIMAS, www.flickr.com. 2019.

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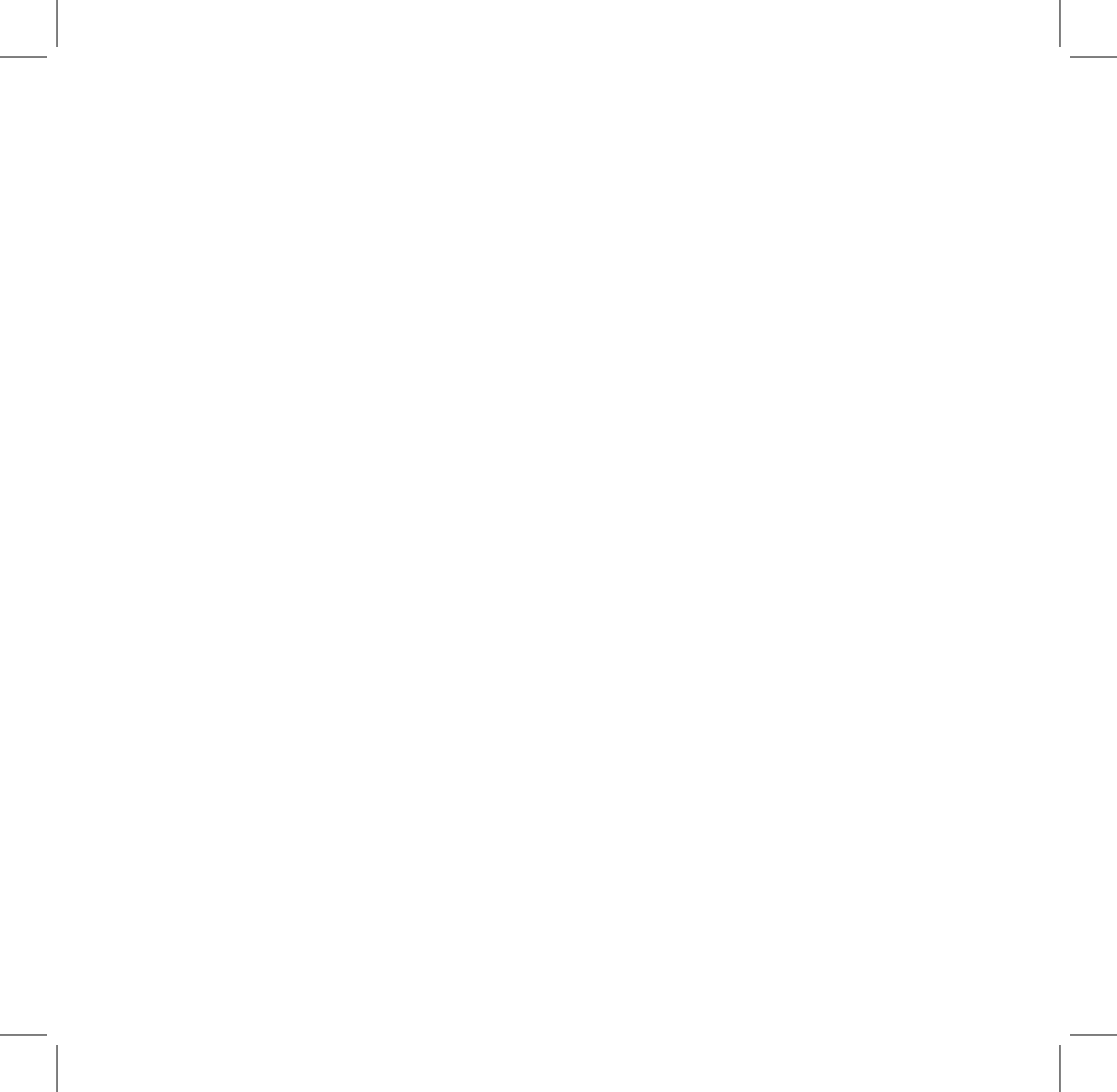Page 39 - CC BY Hanoi University of Science and Technology, 2022.

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