

Perception of Quality Education and Good Practices Using Education for Sustainable Development (ESD)
with Implications for a COVID-19 Recovery and Indigenous Peoples

(Research Report, 28th February 2021, updated: 3rd/4th April 2021)

Annex to the global research report: descriptions of examples of good practice

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Asia-Pacific Region/Australia, Maldives: University of Melbourne with two primary schools, situated in the Maldives and in Melbourne

The initiative focuses on environmental education through a school sustainability project promoting waste management awareness and school gardening. The project has links to the national science curricula framework. Students are hoped to develop a feeling of connectedness between both schools through sharing of knowledge and experiences to promote sustainability across school groups.

The project is approved by the *Maldivian Ministry of Education* and financially supported by a local enterprise. The programme has generated wide interest and approval from both the students with information sessions conducted for parents in the community. Student interest and skills in sustainable practices are heightened and seeing other ways of living has built connectedness.

All four aspects of Education for Sustainable Development (ESD) are applied: *access and retention in quality education, reorienting the curriculum towards sustainability, public awareness and providing training.*

The success is attributed to the involvement of students who can share their unique experiences across digital platforms and share lifestyles from both schools and their communities in a novel project. Students have enjoyed interacting with other students of the same age in another country and sharing their stories about their school and community. It is perceived as a relevant way of addressing the national curriculum in a place-based approach.

The project is highly transferable as more schools are accepting both online learning, promoting sustainable practices and planning for a school garden. A new project has already commenced.

Contact: Dr Rhonda Di Biase, Senior Lecturer

Email: dibiase@unimelb.edu.au

Website: <https://findanexpert.unimelb.edu.au/profile/92270-rhonda-di-biase>

Asia-Pacific Region/Malaysia: International Islamic University Malaysia (IIUM) in partnership with the Indigenous Orang Asli forming the Jungle School Gombak as a community and cultural centre

With the help of the local government and the International Islamic University Malaysia (IIUM), an assessment is conducted, and a strategic plan implemented. This includes rebuilding Traditional Ecological Knowledge (TEK), constructing a cultural centre, developing sustainable tourism and reaching beyond the community. Efforts align to eventually support the development of a *Regional Centre of Expertise on ESD*, as recognized by the *United Nations University's Institute for the Advanced Study of Sustainability* (UNU-IAS).

All four ESD aspects: *access and retention in quality education, reorienting the curriculum, creating public awareness and training* of both teachers and students to address nine SDG themes as well as TEK retention in the community. The project is a component in a larger whole-community approach.

The overall economy of the Indigenous Orang Asli Gombak community has been enhanced. The Jungle School Gombak initiatives have received numerous awards. The success of the project has been attributed to the transparent involvement of the nine Indigenous groups with the ongoing assistance of outside agencies and institutions.

The transferability of the project as a whole is complex but might support building long-term relationships with a community. In addition, certain aspects, such as the sustainable tourism training, can be extracted and individually transferred to other settings.

Contact: Dr Norzalifa Zainal Abidin, Assistant Professor, Jungle School Gombak Founder and Lead Advocate, Department of Applied Arts and Design, Kulliyah of Architecture and Environmental Design, International Islamic University Malaysia (IIUM)
Email: [norzalifa\(at\)iium.edu.my](mailto:norzalifa@iium.edu.my)
Website: www.jungleschoolgombak.com



(Photo credit: Norzalifa Zainal Abidin, Jungle School Gombak)

Asia-Pacific Region/Malaysia: LeapEd® Services in partnership with the Orang Asli

The core sustainability issues, addressed by this project, are largely related to enhancing school attendance and academic achievement through participatory leadership. Also, creating a positive school culture, leading to higher rates of graduation of Indigenous students are at focus.

The activities include developing culturally responsive leadership practices and reciprocal relationships, facilitating multi-agency collaborations, teacher up-skilling and community empowerment. All approaches show improvement in both school attendance and examination success. However, stakeholders find including the Orang Asli practices of community parenting as a part of the school role particularly useful. The trust between parents and schools in caring for the child is perceived as a privilege.

ESD is embedded by addressing *access and retention in quality education, reorienting the curriculum towards sustainability, and training.*

A key element for success is the training of school leadership and teaching staff to bring individualization and mutual respect into their relationships with students. The concept of improvement, based largely on training, is transferable but requires funding for professional development, experts to lead the workshops and a willingness on the part of the school system and staff to actively participate.

Concrete policy recommendations are made from the findings of the study:

1. "...Encouraging high quality child and family engagement through community-based programmes, services, education and support through a process of evaluation and review.
2. Engaging parents and agencies in early literacy and health development to ensure all children arrive at school in good health and ready to learn.
3. Promoting Access and Equity by developing career skills and multi-literacies, such as civil, academic, political, digital and social by reviewing approaches towards people-driven support programmes and classroom practice.
4. Building Resilience and Social Capital through an embedded social-emotional learning curriculum, opportunities for working with other communities and learning experiences using transferable skills.
5. Creating clear partnership-building strategies for schools which focus on communication and relationship building through participatory methodology, two-way communication, incentives, and systems of accountability.

6. Engaging across government agencies with clear processes and structures to ensure Orang Asli concerns are addressed and catered for, and to have resolutions, policies and decisions communicated to the home communities.
7. Supporting young adult and student representation within decision-making bodies and Orang Asli organizations to recommend, advocate and support programmes for social, emotional and academic improvement.
8. Creating a system to evaluate processes and policies which hinder and help Orang Asli groups, and to optimize existing resources within the system by seeking feedback and recommendations from stakeholders.
9. Building capacity and competencies in Indigenous pedagogy, early literacy and numeracy, digital and entrepreneurial skills, Orang Asli cultural and heritage knowledge and skills of new and current teachers with support of private-public partnerships, Orang Asli advocacy groups and teacher training institutes.
10. Increasing capacity within the Ministry and teaching colleges in appropriate and culturally aware and responsive pedagogy for an alternative curriculum.
11. Establishing Elders and Teacher-Mentor programmes in schools with Orang Asli students and to offer in-house needs-based capacity building programmes for youth teachers..."

Asia-Pacific Region/Malaysia: Universiti Malaysia Kelantan (UMK) working with five groups of Orang Asli (semi-nomadic to urban)

This study builds on the three different approaches in delivering curriculum for Orang Asli in Malaysia, namely *regular educational system approach*, the Integrated Curriculum Program of Orang Asli and Penan School (KAP), the *Comprehensive Special School Program (K9)*. The *KAP programme* is only available in primary schools where 100% of the students are of Indigenous decent, making it of limited availability to the wider Indigenous community in blended settings.

Each approach looks different, but all aim at reducing the dropout rates among Orang Asli students. When deviating from the regular educational system approach, schools are using the two different approaches to modify the pedagogy to support the Indigenous students. Largely due to biodiversity loss, land loss or other economic reasons the five Indigenous groups in this study have been forced to migrate and resettle in blended communities where they faced social and economic sustainability related issues of poverty, hunger, exclusion and are unable to be engaged in decent work. There is also cultural loss and poor academic success.

The first 2 aspects of ESD, *access and retention in quality education* and *reorienting the curriculum* are applied.

The report highlighted the lack of teachers who are either Indigenous themselves or are trained in aspects of Indigeneity.

Asia-Pacific Region/Malaysia: MSU College Sarawak in partnership with the Indigenous community creating a longhouse and a primary school

The school and community used three ESD aspects, *access and retention in quality education*, *reorienting the curriculum* and *creating public awareness*, to address sustainability-related issues of lack of education, unemployability, inequalities, unsustainable communities and various environmental concerns. In addition, the community is concerned with maintaining their Indigenous culture and traditional ecological knowledge.

Working with the community, Elders and a traditional Indigenous 'longhouse' museum/centre, teachers modify the curriculum and pedagogy to infuse place-based and hands-on learning, such as river-cleaning and exploring more sustainable agricultural practices.

Students enjoy the programme; the parents approve the approach as being culturally appropriate and the community sees the immediate and long-term value of passing on their cultural heritage.

Transferability to another setting is possible, but depends on it having a cultural centre or a similar institution for the school to collaborate with.

Asia-Pacific Region/Malaysia: Universiti Pendidikan Sultan Idris (UPSI) and Universiti Kebangsaan Malaysia (UKM) proposing a new 'Forest School' for the Orang Asli

Researchers address a low rate of school engagement with Indigenous students, resulting in lower-than-average attendance, academic performance and graduation rates. The researchers hold community consultations to share their perspectives on how children's education could be improved. As a solution, they propose a new 'Forest School', based on traditional knowledge, Indigenous ways of knowing and pedagogy altered to deliver relevant knowledge and skills in an appropriate manner.

Three ESD thrusts are engaged: *access and retention to quality education, reorienting the curriculum towards sustainability and creating public awareness.*

Ongoing interest and participation that leads to a proposal, based on education theory combined with relevant traditional knowledge and insight, indicates the initiative is relevant and potentially successful. While the school has not been constructed, the engagement of the community and education faculty members is useful and has given insight into issues to be addressed in the current school system.

Pursuing community dialogue on new or alternative school concepts is transferable. But expectation management regarding the actual implementation is to be considered for participating stakeholders.

Asia-Pacific Region/Malaysia: Universiti Sains Islam Malaysia (USIM) in partnership with the Orang Asli coordinating a Jungle School

For this project, Indigenous children at preschool age from the local region meet in a school setting to learn to be literate and overall prepared to join the mainstream school system. The school is called *Jungle School* because teaching and learning are based on the jungle setting. Other activities originate from Indigenous culture, such as singing, dancing and story-telling. In a setting that connects what children with what they learn, they are more comfortable and can thrive.

Access and retention in quality education and training are the relevant ESD thrusts at the core of this project.

Transferring such an approach to other regions is possible where there is a space to get together and teacher education institutions have the capacity to train staff to include Indigeneity issues in national teacher preservice and in-service programmes.

Asia-Pacific Region/Malaysia: Universiti Sains Islam Malaysia (USIM) in partnership with the Orang Asli coordinating a multi-age primary school setting

A second project is conducted in partnership with the *Universiti Malaysia Terengganu*. Indigenous children between the ages of 6 to 12 attend a school together and are grouped based on ability and competency rather than age. The programme modifies pedagogical approaches in delivering the core mandated *Malaysian National Curriculum*. Children still have to pass national examination when ready to graduate from primary school level.

Access and retention in quality education is the ESD thrust at the core of this project.

The programme outlines strategies to increase successful school engagement with Indigenous students, enhances attendance, overall academic performance as well as reducing systemic cultural inequities.

Transferring such a programme to other regions might be difficult in regions where classrooms are group-based on certain age levels. Appropriate teacher training in order to work with multi-age groups might also be necessary.

Asia-Pacific Region/Malaysia: Universiti Sains Islam Malaysia (USIM) in partnership with the Orang Asli coordinating a Jungle School

A third project conducted by USIM aims to empower youth and is financed by a grant from the Malaysian Palm Oil Board. Indigenous youth are trained and taught administrative skills to manage oil palm farms. Many of these young people have tried to build their life in the city but did not succeed. They are most likely to return to their home community. With this training, they receive an opportunity to find employment and to consequently remain in their village as adults.

Access and retention in quality education and *training* are the relevant ESD thrusts for this project.

The project is transferrable to other regions. It only needs to be adapted in learning content and partnership to the local business environment to train youth with the relevant skills in each community.

Asia-Pacific Region/Malaysia: Universiti Teknologi Petronas (UTP) in partnership with the Indigenous Community in Tapah (Perak)

This rural community of approximately 100 villagers faces sustainability issues of poverty, hunger, poor education achievement, traditional cultural loss and societal breakdown with their youth migrating to the city for employment.

The community in a multi-sectoral partnership with the university, industry and an NGO launches a series of workshops and hands-on initiatives to undertake a whole-community approach addressing sustainability. They utilize the thrusts of ESD, *access and retention in quality education*, *reorienting the curriculum towards sustainability*, *public awareness*, and *training* in workshops and hands-on initiatives.

There are indicators of success, ranging from economic enhancement from craft product sales, training of youth around the installation of solar energy panels, and the recycling of waste including the elimination of the unhealthy burning of plastics. Programmes to address both cultural loss and issues of poor self-image and exclusion at the school and broader community are also integrated. Most of the initiatives are individually transferable. Concrete policy recommendations are derived from this report:

1. "...The initiatives we had conducted were modeled against SDG4, SDG17 and SDG11.
2. Multi stakeholder partnerships for sustainability were key to the success of us executing these initiatives. In all initiatives we conducted, the community was a key stakeholder.
3. We also established a community-academic-industry-NGO alliance for all projects.

4. Once the projects were initiated and implemented, the community was empowered to monitor its progress and success rate.
5. Most importantly: These initiatives provided alternative pathways to formal education via environmental conservation advocacy and competence development, as well as income generation for the community..."

Contact: Dr Subarna Sivapalan, Senior Lecturer in Language and Communications
 Email: subarnasivapalan(at)gmail.com



(Photo credit (left): Subarna Sivapalan: handicraft purses produced from recycled washing powder plastic bags sold at the village to passing tourist as added source of income. Photo credit (right): Subarna Sivapalan: hydroponics setup below solar panel farm at the Indigenous village)



(Photo credit (left): Subarna Sivapalan: learning from each other, planting of vegetable seedlings next to hydroponics station. Photo credit (right) Subarna Sivapalan: rural sanitation programme. state of toilets prior to refurbishment)

Asia-Pacific Region/New Zealand: Victoria University, Wellington working with local Indigenous community and an NGO in a primary school

Both ESD aspects of *reorienting the curriculum* and *creating public awareness* are utilized to adapt pedagogies to infuse environmental and cultural concerns in the curriculum, including experiential and place-based learning. The learning occurs through non-formal learning processes or *wananga*, exemplifying a local Indigenous communal learning style.

Researchers engage with Indigenous Maori worldviews and language in an ongoing environmental stewardship programme, integrated as initiatives into the school curriculum, such as school gardening, field trips to forests, learning Maori cultural arts or fundraising for the endangered Kiwi bird, etc. Partners work closely with the community and *Enviroschools*, a national NGO.

Student and parental support and enthusiasm are crucial for the success and effectiveness of this project. The practice is highly transferable.

Asia-Pacific Region/ Philippines: Leyte Normal University in a whole-community partnership with the Mamanwa People of Basey

The Mamanwa Peoples are an Indigenous group, that due to civil war resettled to a new location along the biggest river in the region, away from their ancestral land. This has caused severe economic, social and cultural disruption. Currently, they are deeply affected in their basic needs by the pandemic. Leyte Normal University (LNU) has launched a combined effort to address their education needs in a whole-community sustainability approach. This includes a formal memorandum of cooperation (MOC) with the local elementary and secondary schools to reorient the curriculum including pedagogy. In addition, various faculties at LNU have begun documenting the culture. Faculty also address specific needs, such as housing and sanitation, and enhance community income opportunities through entrepreneurial skill training.

Now, children and youth regularly attend classes, previously missed due to poverty and hunger. Moreover, adult women learn to read. Through the partnership, school supplies have been upgraded, including computers. The influence of a neutral, respected university with significant resources has become a central point towards successful change. Local authorities from the *Department of Education*, the mayor and Indigenous Elders build trust, and collaborate in an ongoing transparent process.

All four thrusts of ESD are utilized. The extent of the engagement model in a whole-community approach makes it extremely effective when carried but also difficult to transfer.

Contact: Janet P. Espada, Ph.D., Professor III, Indigenous Peoples Education (UNESCO-ESD) Coordinator
Email: janetpresnilla2007(at)yahoo.com



(Photo credit: Janet P. Espada: Memorandum of Cooperation (MOC) signing between the LNU headed by the University President , Dr Jude A. Duarte and the Mamanwa of Basey headed by its Chieftain, Jennifer Cabadonga on 18 November 2017)



(Photo credit: Janet P. Espada: LNU bridges the gap among the Mamanwa stakeholders (parents, Elders, children, principals, teachers and community leaders) by initiating dialogues to resolve issues affecting Mamanwa education)

Asia-Pacific Region/Taiwan: National Sun Yat-sen University (NSYSU) partnering with communities of Rukai people

Students' sense of place and sustainability competencies are enhanced by introducing TEK into the school curriculum, mainly through the science, social studies and art programmes. The school staff interview several community Elders to guide the place-based approach to field work. It focuses on developing a sense of place, culture and infusing TEK to solve existing sustainability problems of water, air quality and forest management. An overall sense of sustainable living, balanced in harmony with Indigenous heritage, is central to the programme.

Researchers engage the ESD thrusts of *reorienting the curriculum*, *creating public awareness* and *training* of both teachers and students.

Academic achievement is enhanced, and both the school and the community are pleased to have captured some important local wisdom while improving their local environment.

The programme successfully brings several relevant improvements to all stakeholders. It is highly transferable where Elders are accessible, schools are both interested to learn, and the curriculum is flexible.

Contact: Paichi Pat Shein, Professor, Institute of Education, Center for Teacher Education, National Sun Yat-sen University
Email: pshein(at)mail.nsysu.edu.tw

Central Asia Region/Mongolia: Mongolia Normal University of Education (MNUE) in partnership with Mongolian traditional nomadic herders

Sustainability issues of health, education, employability in decent work, climate change practices and cultural identity amongst Mongolian Indigenous herders are addressed. As part of the *Mongolian Sustainable Development Vision 2030*, an NGO conducts a survey to collect information and study Mongolian traditional nomadic herder's approaches to animal husbandry business policy. Concern is raised for the role of their education and training to be a part of their lives and improve their livelihood.

All four ESD aspects, *access and retention in quality education*, *reorienting the curriculum*, *raising public awareness* and *training* programmes are included to address the SDGs and their implications. In particular, the plans call for access and retention in quality education and the need to build resilient communities, able to support the livelihood of the rural poor as well as able to mitigate disaster risks. The survey discloses a number of issues to be next addressed.

This approach is transferable where ways to reach out to communities in rural areas exist and dialogue settings are possible and welcome by stakeholders.

Central Asia Region/Kazakhstan and partnering countries: Regional Environmental Centre for Central Asia (CAREC) Smart Waters USAID Project

The initiative, created by CAREC and academic, governmental and aid agencies, launches a master-level university course in *Integrated Water Resource Management* and related short-term courses including scholarships. Both master's programme and short-term courses are aimed at young policy makers, researchers and managers. Many of them are Indigenous and from traditional communities, scattered across five Central Asian countries and Afghanistan.

The ESD aspects of *access and retention in quality education*, *reorienting the curriculum* and *training* are embedded to develop various initiatives. They all address the multiple sustainability issues related to international water management and regulation and regional water cooperation in the Central Asian

region. As study content directly relates to the regional water management issues, numerous applications for both the master's and the other numerous short-term courses show the demand for such academic offers.

The concept of engaging an academic institution to collaboratively design (accredited) study courses to address either intranational or international sustainability issues involving Indigenous Peoples and their communities is to some extent transferable.

Central Asian Region/Kazakhstan and five partnering countries: Regional Environmental Centre for Central Asia (CAREC): Central Asian Youth Leadership Programme on Environment for Sustainable Development

The programme for emerging leaders targets mid-level managers of state governments, NGOs, academia and focuses on blending the course participants which includes Indigenous and those from traditional rural communities to build new alliances and facilitate ongoing and future regional networking.

This programme primarily utilizes the ESD aspect of *training* in developing youth leadership skills and strengthen sustainable development collaboration. It also created cohorts more likely to partner between governments, NGOs, academia and the private sector in five Central Asian countries and Afghanistan.

The success of the programme which enhances both the career prospects of the individual and their collective contribution to regional management is made evident by its 11-year existence, the support by regional governments and the positive impact of the previous graduates and alumni.

The programme's concept is transferable if the funding for locally relevant design and delivery is available.

Central Asian Region/Russia: Buryat State University enhancing Indigenous language learning

The programme is designed to enhance Indigenous culture and language as well as to improve the economic situation for the local Indigenous People and their tribal communities. All four aspects of ESD *access and retention to quality education, reorienting the curriculum, creating public awareness and training* are used.

Several approaches include cultural events, competitions, summer camps, producing books and other publications in Indigenous languages. Other elements are specialized teacher education programmes, such as conferences, seminars and even a specific agreement to train specialists at the university to address Indigeneity in health care, education, culture and agriculture.

The Indigenous community has developed a growing sense of pride in their culture and there has been an increase in the uptake of Indigenous language. The involvement of many stakeholders, central to that the Indigenous community, makes this project successful. But also the active involvement of significant institutions as well as state and local governments are crucial.

Individual activities from this overall initiative are very transferable as they focus on events and fixed-term engagements. A replication in entirety would be more difficult.

Contact: Dr Nina Dagbaeva, Professor and Director of The Pedagogical Institute; Tamara Tugutova, post-graduate student

Email: ndagbaeva(at)mail.ru; toma04tugutova(at)yahoo.com



(Photo credit: Republic Center of Evenk Culture 'Arun', available at: <http://arun-rb.ru/>)

Europe/Finland: University of Lapland and Sámi oahpahusguovddáš/Sámi Education Institute in partnership promoting vocational education in the Sámi education context

In this practice, the school redesigned the nature guide and reindeer husbandry entrepreneurship study programmes to include culturally responsive pedagogies, local contents with place-based pedagogy, online learning and digital solutions to engage the off-campus periods and vocational training in a student-centered way. The dialogue was expanded to a range of school departments not previously involved as students prepared exhibitions to showcase the results of education innovation project. This case study is conducted in Arctic Pedagogy II, the Sámi Education Digital Network Project, funded by the European Social Fund and led by the Sámi Education Institute, and the University of Lapland as partners.

All four ESD aspects, *access and retention in quality education, reorienting the curriculum, public awareness and training* are included. The activities address concerns of the Sámi youth that face issues of societal changes like rural to urban migration, long-distances, various environmental concerns, reduced inequalities and unsustainable communities. In addition, the community is occupied with maintaining their Indigenous culture and traditional ecological knowledge.

The project included developing a study program by teaching new competencies with the idea to support the students' motivation. A fresh approach to assessment and career building through showing *portfolios* is noted. Students and community provide positive feedback.

The transferability of the concept is possible when locally relevant themes are addressed.

Contact: Dr Pigga Keskitalo, Adjunct Professor

Email: [pigga.keskitalo\(at\)ulapland.fi](mailto:pigga.keskitalo@ulapland.fi)

Website: <https://research.ulapland.fi/fi/persons/pigga-keskitalo>; <https://www.sogsakk.fi/fi>



(Photo credit (left): Satu-Maarit Frangou, University of Lapland: opening of the exhibition at the University of Lapland. Photo credit (right): Satu-Maarit Frangou, University of Lapland: photo workshop. Students chose pictures for the photo exhibition)

South American Region/Peru: Universidad Ricardo Palma and RCE Lima-Callao: Intergenerational Intercultural Learning for 'The Good Living' Project'

This project, developed in rural Peru by Centro Waman Wasi, Lamas and El Dorado local educational institutions, la Dirección Regional de Educación de San Martín, and Kechuas Indigenous organizations namely Consejo Ético de Pueblos and Kechuas de la Amazonia, aims to improve the living conditions of the Indigenous People by encouraging care for the biodiversity of the region and raising awareness for a life in harmony with nature through TEK. Teachers are trained to contextualize the national curricula to suit the Amazonian culture and local biodiversity and to stimulate a community dialogue on knowledge systems bridging the official education culture and the Indigenous learning culture.

All four aspects of ESD are addressed: *access and retention in quality education, reorienting the curriculum, public awareness and training.*

The success of the programme is evident by increased student attendance, student engagement in classes, enhanced language learning and ability to solve daily life issues. Community approval is high.

The programme can be transferred to other regions in Peru and beyond, if locally relevant themes are addressed.

Contact: Jorge Ishizawa

Email [jorge.ishizawa\(at\)gmail.com](mailto:jorge.ishizawa(at)gmail.com)



(Photo credit: Centro Waman Wasi: Community calendar of biodiversity. Prepared by teacher Celia Encarna Ríos Vigil, El Dorado Province, 2020)

South American Region/Peru: Universidad Ricardo Palma and RCE Lima-Callao 'Biodiversity and Climate Cyclical Calendar for the four living spaces'

This work reported was developed by Institución Educativa N° 00561 Ramirez, Jepelacio, Moyobamaba, San Martín. Peasant and Indigenous families are encouraged to keep their TEK beyond official education curricula alive in this project and to create useful learning during the COVID-19 pandemic without interrupting the parents in their chores. The goal is to develop a cyclical calendar reflecting the local biodiversity and climate reality of the traditional four living spaces: water, forest, farm field (*Chacra*) and home. Students, parents/ grandparents, guided by the school through its teachers, develop the calendar jointly in sharing knowledge and systematically integrating it into the calendar. Stakeholders can share the final product in the community and with other schools.

Two aspects of ESD are addressed: *public awareness and training.*

The project has proven both popular and useful as students are able to learn practical and relevant life skills while assisting with the family income through farming during the pandemic as schools are closed.

The concept, addressing a real need, based in locally available wisdom and carried out at very little cost is easily transferrable. It needs the support and sharing of the community.

Contact: Rider Panduro

Email: riderpm60(at)gmail.com



(Photo credit (left): Institución Educativa N° 00561 Ramirez: Sage sharing biodiversity conservation knowledge. Photo credit (right): Institución Educativa N° 00561 Ramirez: Communal calendar of biodiversity with drawing depicting the 4 living spaces)

South American Region/Peru: Universidad Ricardo Palma and RCE Lima-Callao Diploma Course in Biodiversity and Knowledge Systems

This project was developed by Universidad Ricardo Palma, RCE Lima-Callao, Gobierno Regional de San Martín and local institutions supported by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH) and the United Nations Environment Programme (UNEP). A locally relevant diploma course for Indigenous youth, Indigenous leaders and engineers and other technical managers who work in the area affecting the lives of the Indigenous People, is the focus of this activity. The course aims to not only to train the young Indigenous leaders in science and technology related to water, forest, agriculture and housing. But it aims to encourage intercultural dialogue and understanding to address local issues, such as Indigenous leaders rejecting scientific and technological knowledge and engineers etc. rejecting TEK. This intercultural gap has impact on issues, such as health, water and sanitation as well as land invasion.

The activities include three aspects of ESD, *access and retention*, *public awareness* and *training*.

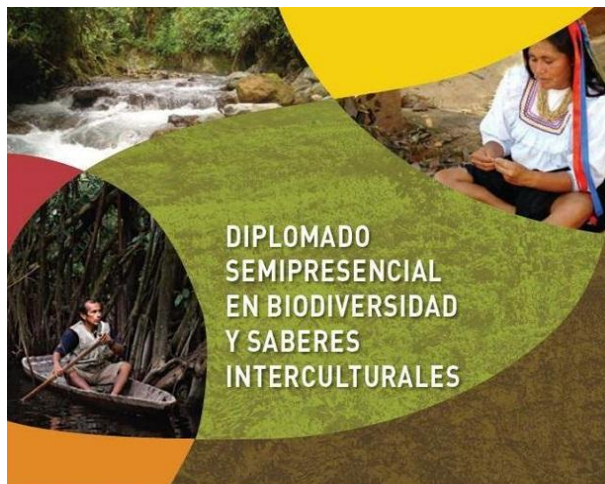
Indicators of success include the Indigenous student's improved ability to articulate and present their worldviews and TEK, Non-Indigenous professionals gain insight into traditional perspectives and NGO staff in attendance are able to transfer the learnings in other communities where appropriate to share the wisdom with others. Both knowledge and intercultural respect are enhanced.

The concept of the programme is transferrable, but the specific knowledge and issues will have to be contextualized and locally developed.

Contact: Dr Teresa Salinas, Professor, Executive Director, Instituto Peruano del Pensamiento Complejo Edgar Morin-IPCEM/Universidad Ricardo Palma; Executive Director, RCE Lima-Callao

Email: teresa.salinas(at)urp.edu.pe

Website: www.urp.edu.pe/ipcem; www.urp.edu.pe/rcelimacallao.org



(Photo credit: Universidad Ricardo Palma: The Diploma Course on Biodiversity and Dialog of Knowledge Systems presentation)



(Photo credit (left): Universidad Ricardo Palma: Diploma Course classes in Lamas, San Martín. Photo credit (right): Universidad Ricardo Palma: Indigenous participants attended second RCE of the Americas Conference in Lima)

South American Region/Venezuela: Universal Great Brotherhood (UGB), also known as Gran Fraternidad Universal: All Hands to Sow

This project addresses several community issues including employability, health and malnutrition. The Universal Great Brotherhood (UGB) leads initiatives with the village school, the Elders and other community members. UGB staff conduct workshops for families to learn, i.e. through a local communal garden project about nutrition and Indigenous food traditions, framed in a *Manual of Ancestral Meals*. Built into the project is the oral sharing of TEK by Elders to spark discussions and learnings about their traditional culture, such as origin stories, customs and ethical and cultural values. Further community workshops on entrepreneurship prove to be helpful in the communal marketing of crops and handicraft products.

The activities utilize two aspects of ESD, *public awareness* and *training*.

The programme has improved the village nutrition and the entrepreneurial training has considerably aided young adults, as their previous unemployment led to crime and addiction.

The concept of the TEK community awareness and training project is certainly transferable at the village level.

Contact: Supreme Council of the Universal Great Brotherhood: Dr Serge Raynaud de la Ferriere Foundation. Secretary General: Antonio José Escobar Brand. Head of International Relations: Luis Orlando Rodríguez Villa.
Email: orodriguezny(at)gmail.com

South American Region/Venezuela: Universal Great Brotherhood (UGB), also known as Gran Fraternidad Universal: Resources for Learning

UGB aims to increase the respect for and knowledge of their tribal culture. The school and community jointly develop local learning materials with pedagogical and didactic content to compliment and strengthen the aims of existing national curricula to serve this community. These learning materials are based on their local stories, depicting their own experience, in their own *Jivi* language with appropriate illustrations. The materials foster a culture of responsibility and commitment to the education of the village youth.

Three aspects of ESD are utilized: *access and retention, reorienting the curriculum towards sustainability and public awareness.*

The intergenerational collaboration in capturing tribal stories, legends and rituals as they are about to disappear comprises the success of this programme. Other indicators include a positive force in the community, as cultural roots and language are strengthened, a catalogue with local words and explanations/drawings started, and the local economy is strengthened.

This project is transferrable, but it is dependent on the support of the community. It aligns with and even enhances the learning outcomes of the national curricula.

Contact: Supreme Council of the Universal Great Brotherhood: Dr Serge Raynaud de la Ferriere Foundation. Secretary General: Antonio José Escobar Brand. Head of International Relations: Luis Orlando Rodríguez Villa.
Email: orodriguezny(at)gmail.com

South American Region/Venezuela: Universal Great Brotherhood (UGB): Festival of Knowledge, Sound and Ancestral Flavours

This project builds respect amongst the general population for Indigenous Peoples and their knowledge including TEK, wisdom and culture, focusing on the ESD thrust *public awareness.*

A series of events, called *Festival of Knowledge, Sounds and Flavours*, in cultural places in the national capital, such as museums and parks. UGB in collaboration with the *Pedagogical University of Caracas* and two government ministries hold an annual series of presentations, workshops, concerts, dances, and tastings of traditional recipes. Indigenous musical instruments are exhibited and played, communities perform dances and explain rituals.

Incorporating the Festival into the pedagogical training of pre-service teachers at the university has been very helpful in creating understanding and respect for the Indigenous students that the teachers may eventually have in their classrooms.

The concept is large when launched as its own annual festival series in a new region. Elements of it could also be modified to be transferred into existing events.

Contact: Supreme Council of the Universal Great Brotherhood: Dr Serge Raynaud de la Ferriere Foundation. Secretary General: Antonio José Escobar Brand. Head of International Relations: Luis Orlando Rodríguez Villa.
Email: orodriguezny(at)gmail.com

South American Region/Venezuela: Universal Great Brotherhood (UGB), also known as Gran Fraternidad Universal: Psychophysical Education and COVID Psychophysical Exercises

This programme already incorporates the COVID-19 pandemic precautions into its design. It is based on the *Ministry of Education's Physical Education and Sports Programme* and aims to include exercise routines perceived helpful in fighting viruses. If infections take place, a person following regular exercise may be in a better position to respond and reduce the overall impact. Exercises also help to increase lung capacity as well as other muscular, organs and glandular enhancement. In addition, daily morning yoga-based practices enhance mental learning faculties, such as concentration, attention and reflection as well as emotional balance.

Three aspects of ESD are addressed: *access and retention, reorienting curriculum towards sustainability and creating public awareness.*

The benefits included: help for children and youth in a state of malnutrition and suffering from rickets, as the yoga-based exercise strengthens weakened bone structures. It also establishes a life-long physical routine that can be practiced by anyone of any age and as a non-team sport. In addition, this project is in harmony with the *All Hands Sow* project. It stresses nutrition and healthy eating as a synergistic community-wide parallel programme.

The concept of the programme essentials is very transferrable. Yet, it requires a certain knowledge and understanding to practice yoga.

Researchers derived concrete policy recommendations from the outcomes of the four Venezuelan projects:

1. "...Create ecological strategies to conserve the natural life systems of Indigenous peoples, its connection with mother earth, its ancestral medicines and its healing rituals as world cultural heritage.
2. Value and protect Indigenous knowledge regarding the education of their children, that is, an education from home or the family, the transmission of their moral and ethical values, through example, a lip-to-ear teaching, preserved from their ancestry.
3. The School must be a place for real interculturality, that is, it is to learn to relate in life outside of its Community, without modifying its own.
4. The School must be a place to exalt the Indigenous culture, where the self-esteem of the child and the Indigenous youth is strengthened, the history of its people and the ancestral culture to which it belongs is respected and valued.
5. The physical structure of their schools should be similar to the architecture of their homes.
6. Teachers and Professors must complement their pedagogical training in Indigenous languages and cultures.
7. Training from the School, Indigenous youth to develop sustainable and sustainable economic production activities.
8. From the school and with the participation of community members, encourage young people to make their crafts.
9. Promote the organic cultivation of seeds, from the school, with the elaboration of family gardens and the school garden, through the participation of the community, and encourage the love of planting.
10. From the school promote the micro-enterprise, for example, sale of the products of its crops, or of its crafts, of its medicines.
11. Activities like the Festival of Knowledge Sounds and Flavors and the Indigenous Festival was held, where ideas and knowledge of ancestral cultures were exchanged, in such a way as to strengthen and spread their customs and worldview. These festivals were carried out in conjunction with the Universidad Pedagógica

Experimental Libertador (UPEL), the Instituto Pedagógico de Caracas IPC, and the Dr Serge Raynaud de la Ferrière Foundation, for three consecutive years (since 2018),

12. The Dr Serge Raynaud de la Ferrière Foundation celebrated the International Day of Indigenous Peoples (August 9) with lectures via online..."

Contact: Supreme Council of the Universal Great Brotherhood: Dr Serge Raynaud de la Ferriere Foundation. Secretary General: Antonio José Escobar Brand. Head of International Relations: Luis Orlando Rodríguez Villa.
Email: orodriguezny(at)gmail.com



(Photo credit (left): handicraft work with recycled material, children of the Educational Unit ,Professor Miriam Rubio' in Santa Cruz de Mara, Zulia, Venezuela. Photo credit (right): Indigenous children practicing the ,Psychophysical Culture', led by the researcher, Professor Maritza Quintero and the Indigenous Advisor of the project Professor Edison Fernández of the Wayu Indigenous Community. Educational Unit Professor Miriam Rubio, Zulia, Venezuela)

South American Region/Chile: The *Wekimun Chilkatuwe* (School), The *Williche* Council of Chiefs of Chiloe (Chile) and The Young Lives Research Laboratory (YLRL) at York University, Toronto, Canada

The project aims to recuperate and revitalize traditional *Williche* knowledge, culture and ways of living well and to engage aspects of both traditional and modern knowledge in providing youth with transferrable skills that are grounded in their territory, history, culture and community. In the *Williche* language *Mapudungün*, *wekimün* means new knowledge; the integration of new and traditional knowledge. The *Wekimün Chilkatuwe School*, located in the archipelago of Chiloé, integrates modern knowledge with traditional *Williche* cultural knowledge to produce a unique educational program that serves the needs of the local *Williche* communities. The ultimate outcome of the *Wekimün School* Project was to support a better quality of life for all *Williche* people, as decided by *Williche* people, through education that is faithful to the spirit of *wekimün* and based in culture, language, human and Indigenous rights, gender equity, and governance. Each of the goals are based upon principals of youth and community engagement, decolonized practices, gender equality, wellbeing, and human rights. To achieve the goals, the project co-leaders worked to train Indigenous youth to co-conduct a community needs assessment to identify the most pressing needs of youth and communities to inform the content, pedagogy, structures, curriculum and human relationships that animated *Wekimun Chilkatuwe* (school).

Beyond preparing youth for future employment, the curriculum focuses on developing personal and community understanding and participation in community governance and sustainable development projects. It also creates understanding for human rights and gender equity. All students receive training

in sustainable subsistence skills, including traditional organic agriculture and seafood harvesting, all in harmony with the *Williche* traditional cosmovision.

Using all four aspects of ESD, *access and retention, reorienting the curriculum, creating public awareness and training programmes*, the programme is popular. Knowledge of and pride in their *Williche* culture and cosmovision has increased. The focus on human and Indigenous rights, gender equity and governance support students and their community in living in balance and harmony with the world around them.

The programme is specially designed by the *Williche* people, but the underlying concept is transferrable. An implementation of such projects depend on local circumstances and require co-engagement of several stakeholders including youth and their communities. At the time of writing this report, Wekimun Chilkatuwe School has moved to an online platform to accommodate COVID pandemic health regulations. New courses are being developed for summer 2021 offerings with ongoing development and evaluation planned to include ESD principles.

Contact: Dr Kate Tilleczeck, Professor & Canada Research Chair on Youth, Education & Global Good; Director Young Lives Research Laboratory; Faculty of Education

Email: [katetill\(at\)edu.yorku.ca](mailto:katetill(at)edu.yorku.ca)

Website: <https://wekimun.cl/>; <https://younglivesresearch.ca/>



(Photo credit (all): Pedro Andrade)

Central American Region/Nicaragua: University of the Autonomous Regions of the Nicaraguan Caribbean Coast

The researchers engage the school and the community to identify sustainability issues relevant to the community today and anticipated. The lack of employability of school leavers displays economic challenges. Social issues of cultural loss and moral/spiritual/religious ethos in the youth are also present.

To address these and other issues in school, teachers plan to adapt a number of curricula and to implement pedagogical changes. These proposed changes include educating in the native language of *Miskito*, teacher professional development, engaging the community and school in value discussions and civic responsibilities. Teachers hope to increase graduation outcomes through individualized curricula and the development of more motivational didactic materials. Contact with parents has grown closer through the consultations.

Using all four aspects of ESD, *access and retention, reorienting the curriculum, creating public awareness and training programmes*, this programme is hoped to be successful. As it is reported during its planning stage, there are no indicators of eventual success, but the school engagement of the students, parents and community is very well received.

The transferability of this type of dialogue and planning initiative is quite easily achieved. However, expectation management might be necessary regarding the necessary efforts and resources needed and available for implementation.

North America Region/United States of America: Salish Kootenai College, Eagles Programme

The initiative aims to engage schools, the community and government institutions to address climate change and enhance knowledge of TEK and other culture related issues. The *Confederated Salish Kootenai Tribes* council has endorsed the *Climate Change Advisory Committee* forming a youth organization, *EAGLES*, that addresses environmental, climate change, food and other sustainability issues. The youth-led groups are housed in middle and secondary schools on the reservation. They include Elders, government extension services, tribal professional services and others to enhance their academic knowledge and future employability. TEK has become more respected and acknowledged by climate scientists and policy makers.

All four aspects of ESD, *access and retention, reorienting the curriculum, creating public awareness and training programmes* are addressed.

The programme is popular with students who are proud to be members. The schools integrate many of the activities into the ongoing science, history and other related disciplines. The hands-on and place-based pedagogy has made schools more relevant for students.

The programme is transferrable but requires coordination and funding. Activities could be scaled up towards the system level.

North American Region/Canada: University of Prince Edward Island and Potloteck First Nation

The researchers engage the school and the community '*L'Nu*' to support the local Indigenous language '*Mi'kmaq*', enhance traditional cultural values and skills through restorative justice practices under the leadership of Elders, such as bringing Elders back in to the teaching and learning space as role models. The school supports literacy development through performance and media/video creation. Teachers engage with parents and the wider *L'Nu*, forming *The Digital Generations Project*. The project is the jointly achieved result of combining theatre play, story creation, video production, literacy instruction, with help from the children's' theatre group and the community's radio station technicians. The project meets almost all the mandated *Nova Scotia Department of Education and Early Childhood Development* learning objectives for the grade 3/4 levels. Most importantly it builds respect for the *L'Nu*'s culture and deepens connections.

Three aspects of ESD are utilized: *access and retention, reorienting the curriculum and creating public awareness*.

The *L’Nu* enhances their understanding of the meaning and context of traditional storytelling, the need for accuracy in telling and interpreting their stories. This is important as the *Mi’kmaw* history is traditionally transmitted orally. The project addresses both the desired mainstream literacy outcomes but also *Mi’kmaw* approaches to culture of oral traditions.

The school and community perceive the project to be highly transferrable to other settings if *L’Nu*’s approval and support can be secured.

Contact: Kathy Snow, Associate Professor, Faculty of Education

Email: ksnow(at)upei.ca

North American Region/Canada: Fleming College: Bishkaa Peer Mentorship Programme

Improving Indigenous graduation rates and employability as well as developing leadership skills amongst Indigenous students are at focus for this initiative.

The *Bishkaa Mentorship Programme* builds a community of peers at the college that centres on the overall health and well-being of the students. Beginning with a summer orientation programme, focused on TEK, place-based learning and building self-esteem, first-year students, prone to feeling isolated and excluded, are enveloped in a peer programme with other, more experienced students, Elders and knowledge holders. They are given a safe physical place in the college to gather and have access to trained staff to talk with. The cultural activities with Elders continue throughout their time at college.

This programme uses *access and retention* and *reorienting the curriculum* as the ESD aspect.

The programme has led to higher levels of academic engagement, retention and graduation rates (rates of 100% are often achieved). Enhanced leadership skills as well as employability are also reported.

Staff, students and graduates feel that the *Bishkaa programme* in its essence could easily be transferred to other settings around the world.

North American Region/Canada: First Nations Technical Institute (FNTI): Braided Healing with Learning within the College Community

Each class setting is composed of an instructor delivering the course content, an Elder carrying the teachings and Indigenous perspectives as well as a student success person preparing and coordinating the classes. They together provide the three elements of braided learning to support the personal growth and academic success of all students. Elders or Cultural Advisors work alongside Instructors to bring cultural relevance to western curriculum. They help students on their personal journeys including dealing with the inter-generational trauma they may carry with them due to colonization. Classes begin and end in ceremony and so cultural practice is embedded within routine of each day. The student success workers help with organizing materials and classroom activities and also act as additional mentors and support persons to each student.

The *Braided Healing Programme* supports academic success but also strengthens Indigenous students’ own sense of identity. It is part of a larger programme focusing on the ESD thrusts, *access and retention* and *reorienting the curriculum*.

The overall FNTI programme, offering both university and college diploma courses is designed to for students who need to stay in their communities to maintain their commitments while they aim to upgrade their skills. This is of particular benefit to women and their families. The programmes are developed in consultation with Indigenous communities looking for graduates with specific credentials to fulfill employment needs within the community.

Indicators of this success include an average of 94.% graduation rate and 96% employment. Staff and students feel a high degree of potential transferability.

North American Region/Canada: Laurentian University and the City of Greater Sudbury

In this project, the two school systems with an Indigenous student population of approximately 11% address the issues of countering dropout, diminishing TEK and cultural knowledge within their respective *Indigenous Education Advisory Councils* endorsed by *Ontario Education Ministry*. The *Ontario Education Ministry* is committed to increase opportunities for Indigenous language learning, however there is a scarcity of qualified teachers.

Currently, the two school boards in Sudbury offer a number of *Ojibwe* courses in the secondary school curriculum, courses covering cultural themes and world-views, and workplace preparation. Additionally, a land-based semester programme is available. With these measures, stakeholders hope to improve graduation rates and employability of Indigenous students while maintaining their culture and language.

Two aspects of ESD, *access and retention* and *public awareness* are utilized.

A further dialogue with the *Indigenous Education Advisory Councils* leads to 11 recommendations for school boards to address *Wise Practices* in Indigenous education, as follows:

1. "...Continue Indigenous education professional development and recognize the knowledge of Indigenous peoples as a competency in high schools with a significant Indigenous student population.
2. Continue and expand upon the informal Indigenous curriculums to raise collective awareness of Indigenous peoples and issues.
3. Create culturally-safe spaces for Indigenous students at high schools.
4. Define the role of the Indigenous Education Worker and adequately compensate.
5. Engage in a recruitment and retainment strategy to hire Indigenous teachers that are proportionate to the Indigenous student population.
6. Collaborate in Indigenous field trips and extracurricular learning activities.
7. Collaborate city-wide with teachers interested in sharing wise practices in Indigenous curriculum development and culturally-relevant assessments and pedagogies.
8. Provide additional resources to Indigenous students who are older than the average age of other students at their grade level.
9. Conduct further research as to why Indigenous students are more likely to have special education need designations and how these designations generate barriers to completion. In addition, provide additional resources for Indigenous special education need students that aim to improve their completion rates.
10. Examine why Indigenous students are more likely to receive suspensions and ensure that those who are suspended successfully transition back and complete school.
11. Ensure more Indigenous students enroll and complete preparatory classes, such as Math and English..."