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**Lecture on the occasion of the
IBRAF Fellowship Program organized by the Brazil
Institute
Under the theme:
*“Education and Training in Sustainable Development:
Empowerment of Youth and Women”***

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INTRODUCTION

Protocols,

On behalf of the African Union Commission (AUC), the Chairperson of the Commission, **H.E Moussa Faki Mahamat** and the entire Department of the Human Resources Science and Technology, it is with the great enthusiasm that I present this lecture under the theme: *“Education and Training in Sustainable Development: Empowerment of Youth and Women”*.

I seize this occasion to appreciate the organizers the Brazil Africa Institute IBRAF, for holding this meeting on this pivotal thematic. This event reiterates our common shared values of African and Brazil’s customs, history and heritage of African descent to foster the development of human capabilities for advancement of our youth and women in line with the AU theme for 2021 on Arts, Culture and Heritage: Levers for Building the Africa we want.

Education and training are powerful levers for the production of human capital. Africa’s youth comprise over 60 % of the population and we need to develop their competences so that they can face the challenges of the 21st century. Our continental framework, Agenda 2063 recognizes, through its aspiration 6, that Africa’s Development is people driven, relying on the potential of the African People, particularly its Women and Youth. By 2063, 46% of the increase in Africa’s labor force will constitute of young people aged 15-35. These young people must access and obtain basic, secondary and tertiary level of education and skills and their potentials for innovation, inventiveness, entrepreneurship, employability and responsible citizenship must be unlocked.

Effective implementation and monitoring of our Continental Education Strategy for Africa CESA (16-25) and SDG 4 on quality education will be the enablers to fight against poverty in Africa and close the gender gap in many socio-economic sectors in the continent. According to the UN, over the past decade, major progress has been made towards increasing access to education and school enrolment rates at all levels, particularly for girls. Nevertheless, about 260 million children were still out of school in 2018¹. Nearly one fifth of the global population in that age group. And more than half of all children and adolescents worldwide are not meeting minimum proficiency standards in reading and mathematics.

The same source related that in 2020, as the COVID-19 pandemic spread across the globe, a majority of countries announced the temporary closure of schools, impacting more than 91 per cent of students worldwide. By April 2020, close to 1.6 billion children and youth were out of school². And nearly 369 million children who rely on school meals needed to look to other sources for daily nutrition.

¹ <http://uis.unesco.org/en/topic/out-school-children-and-youth>

² <https://en.unesco.org/covid19/educationresponse>

1- THE CONCEPT OF SUSTAINABLE DEVELOPMENT, AND THE CONCEPT OF EMPOWERMENT

a- Concept of Sustainable Development

The Bruntland Commission Report (1987) first coined the term SD and described it as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. SD is amongst the central principles of development (United Nations, 2002). It involves three main aspects that is economic growth, environmental protection, and social equality³.

According to the United Nations Secretary-General’s High-level Panel on Global Sustainability (2012). Resilient People, Resilient Planet: A future worth choosing. New York: United Nations, states that Sustainable development is not a destination, but a dynamic process of adaptation, learning and action. It is about recognizing, understanding and acting on interconnections — above all those between the economy, society and the natural environment⁴. Sustainability is a paradigm for thinking about a future in which environmental, social and economic considerations are balanced in the pursuit of development and an improved quality of life. These three spheres – society, environment and economy – are intertwined. For example, a prosperous society relies on a healthy environment to provide food and resources, safe drinking water, and clean air for its citizens. The sustainability paradigm is a major change from the previous paradigm of economic development with its damaging social and environmental consequences. Until recently these consequences have been seen as inevitable and acceptable. However, we now realize that major damage or serious threats to the well-being of humans and the environment in pursuit of economic development have no place within the sustainability paradigm.

We might then ask, what is the difference between sustainable development and sustainability?

Sustainability is often thought of as a long-term goal (i.e. a more sustainable world), while sustainable development refers to the many processes and pathways to achieve it (e.g. sustainable agriculture and forestry, sustainable production and consumption, good government, research and technology transfer, education and training, etc.).

Principles of Sustainable Development:

All sustainable development programmes must consider the three spheres of sustainability – environment, society and economy – as well as an underlying dimension of culture. Since sustainable development addresses the local contexts of

³ <https://www.ippapublicpolicy.org/file/paper/59497422d4085.pdf> In 1987, the Bruntland Commission published its report, Our Common Future, in an effort to link the issues of economic development and environmental stability. In doing so, this report provided the oft-cited definition of sustainable development. https://sustainabledevelopment.un.org/content/documents/5839GSDR%202015_SD_concept_definiton_rev.pdf

⁴ https://en.unesco.org/system/files/GSP_Report_web_final.pdf

these three spheres, it will take many forms around the world. The ideals and principles that underlie sustainability include broad concepts such as equity among generations, gender equity, peace, tolerance, poverty reduction, environmental preservation and restoration, natural resource conservation, and social justice.

The Rio Declaration contains 27 principles, including:

- People are entitled to a healthy and productive life in harmony with nature.
- The right to development must be fulfilled so as to meet developmental and environmental needs of present and future generations in an equitable way.
- Eradicating poverty and reducing disparities in living standards in different parts of the world are essential to sustainable development.
- Environmental protection is an integral part of the development process and cannot be considered in isolation from it.
- International actions in the fields of environment and development should also address the interests and needs of all countries.
- To achieve sustainable development and a higher quality of life for all people, countries should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.
- Women play a vital role in environmental management and development. Their full participation is therefore essential to achieving sustainable development.
- Warfare is inherently destructive to sustainable development. Peace, development, and environmental protection are interdependent and indivisible.

These principles can guide the efforts of governments, communities, and organizations to define sustainability goals and create programmes to help achieve those goals.

Perspectives of Sustainable Development:

Not all the concepts associated with sustainability are incorporated in the 27 principles of sustainable development in the Rio Declaration. Accompanying principles of sustainable development are perspectives that have become part of the global sustainability dialogue, such as:

- A system thinking approach, rather than an approach that looks at problems in isolation should be used. Sustainability issues are linked and part of a “whole.”
- Understanding local issues in a global context and recognizing that solutions to local problems can have global consequences.
- Realizing that individual consumer decisions affect and give rise to resource extraction and manufacturing in distant places.
- Considering differing views before reaching a decision or judgement.
- Recognizing that economic values, religious values, and societal values compete for importance as people with different interests and backgrounds interact.
- Seeing all humans as having universal attributes.
- Knowing that technology and science alone cannot solve all of our problems.

- Emphasizing the role of public participation in community and governmental decision-making. People whose lives will be affected by decisions must be involved in the process leading to the decisions.
- Calling for greater transparency and accountability in governmental decision-making.
- Employing the precautionary principle – taking action to avoid the possibility of serious or irreversible environmental or social harm even when scientific knowledge is incomplete or inconclusive.

It is important that educators, leaders, and citizens recognize that sustainable development is an evolving concept and that the list of sustainability perspectives can therefore grow and change.

Values within the Sustainability Paradigm:

Throughout its history, the United Nations has been a champion of values related to human dignity, fundamental freedoms, human rights, equity, and care for the environment. Sustainable development takes these values a step further, extending them beyond the present generation to future generations. Sustainable development means valuing biodiversity and conservation along with human diversity, inclusivity, and participation. In the economic realm, some embrace sufficiency for all while others uphold equity of economic opportunity. Another vehicle for the values inherent in the sustainability paradigm is the Earth Charter, a declaration of fundamental ethical principles for building a fair, sustainable, and peaceful global society.

Reorienting Curriculum to Address Sustainability:

Reorienting a curriculum to address sustainability can take place at a classroom or national level.

At the classroom level, teachers can begin by explicitly stating the link between the topic in the mandated syllabus and sustainability. For example:

- Today we are learning about World War II. As you know, war is considered an unsustainable state in which human lives are lost and resources wasted. One of the principles of sustainability is that warfare is inherently destructive to sustainable development. Why do you think war prevents countries from making progress towards sustainability? (for example rather than spending national income on human well-being it is spent on human destruction).
- Today we are discussing health risks related to contaminated water. Access to water is now considered a human right, and human rights are fundamental in creating sustainable communities.
- Today we are talking about international trade. Think about the shirt that you are wearing and where the fibre came from, where the cloth was made, where the shirt was sewn, and how it was transported to where you are. How much energy did that take? What is the carbon footprint of your shirt? How is your shirt related to sustainable use of resources?

From simple statements such as these, pupils will build their conceptions of sustainability and their knowledge of it.

Several tools to reorient a curriculum to address sustainability have been created. The ESD Lens “Review Tool 9: ESD integration in the curriculum” provides a way for analysing the extent to which ESD is integrated in the curriculum at national and school levels. The Education for Sustainable Development Toolkit contains eight exercises for reorienting a curriculum to address sustainability and holding community forums to gather public opinion related to curricular change. “Project Y” has also been used widely to integrate sustainability into existing lesson plans and units. Project Y takes a gradual approach, introducing one or a few new items related to sustainability in each lesson. Over the course of a school year, the aggregate amount of sustainability taught and time on task (i.e. learning about sustainability) can be substantial.

The reorienting process can also occur at national levels or provincial/state levels in ministries of education where the mandated curriculums are written. A national or provincial process should be conducted more systematically and thoroughly than a reorienting process carried out by a teacher working in isolation or by a small team of teachers working in a school. A national or state level process would include inviting stakeholders to a public participation process to gather input (e.g. statements of needs and desires as well as opinions) related to the reorienting process. In this way, a ministry will be modelling public participation and transparency, which are essential elements of sustainability. (See Case Study: Toronto Board of Education Curriculum Revision and Reorientation, http://www.esdtoolkit.org/discussion/case_study.htm).

b- Concept of Empowerment

The concept of Empowerment refers to stepping up the strength of individuals and communities in the realms of spiritual, political, social, or economical categories (Tope, 2011). It is significantly used in the programs commenced for youth. As a social construct, it is widely shared by many disciplines and arenas such as community development, psychology, sociology, education, economics, management sciences, political studies, studies of social movements and organizations.

Empowerment also means having the ability for supporting enabling conditions under which young people can act on their own behalf, and on their own terms, rather than at the direction of others. These enabling conditions fall into major categories such as an economic and social base; political will, access to knowledge, information and skills, adequate resource allocation and supportive legal and administrative frameworks; a stable environment of equality, peace, democracy, and positive value system (State of the African Youth Report, 2011).

It also stresses people to receive education, to have better health, to have access to decent employment opportunities and to be benefitted from civic and political empowerment. These constructive measures help a country to compose sustainable development and long-term growth while harnessing vigorous youth (boys and girls) imbued with energy in positive development to prevent the same potency used in social vices. It is a major challenge of modern-day knowledge-based economies,

besides others, to keep the young people, including women at the centre of development agenda. It is, therefore, essentially important to have meaningful participation of youth and women in development process across the board to make socio-economic, cultural, and political development (Olalekan, 2013).

Lausch (2011) stated that very often and wide use of term empowerment has made its definition blurred. As explained by Malhotra et al., (2002), the word empowerment came into limelight for civil rights of marginalized people for instance women, the poor, and empowering community through development. It relates to the ability of people in gaining a considerable understanding and control over the matters related to personal, social, economic, and political forces to improve their life situation (Israel et al., 1994). The process of empowerment enhances the power or capacity of people to implement by acting (Czuba, 1999). For an action to be done, empowerment is essential (Schusler et al., 2009). Empowerment itself cannot promise the well-being and prosperity until and unless people take charge of it (Gergis, 1999).

2- EDUCATION AND TRAINING IN SUSTAINABLE DEVELOPMENT FOR THE EMPOWERMENT OF WOMEN AND YOUTH

a- Education and sustainable development

Education has long been identified as key to translating the ideals of sustainable development into practice through enhancing people's skills and capacities to respond to change and supporting the transition to a green economy. UNESCO's International Research and Training Centre for Rural Education (UNESCO-INRULED, 2012, p. 23) noted the importance of an integrated approach to education, training and support shaped around the three central elements of sustainable development: i) claiming a stake for the marginalized in development; ii) responding to the feminisation of poverty; and iii) ensuring that sustainable production and consumption involves everyone, not just the poor.

The Decade for Education for Sustainable Development (DESD, 2005 - 2014) focused attention on the importance of education in supporting and facilitating the new values and practices required for a sustainable future: 'Sustainable development requires changes in the way we think and act. Education plays a crucial role in bringing about this change' (UNESCO, 2013, p. 1).

The proposal for a global action programme to follow the decade emphasises the need to strengthen Education for Sustainable Development in formal, non-formal and informal settings, including the private sector, and to enhance e-learning and mobile learning opportunities for young people (ibid, p. 4). The seven Education for Sustainable Development principles outlined in the proposal recognise the transformative potential of participatory education, emphasising: 'innovative, participatory teaching and learning methods that empower and motivate learners to take action for sustainable development' (UNESCO, 2013, p. 2).

However, the proposal makes no reference to gender equality or women's rights, in contrast to the strong concerns around the feminisation of poverty raised in other policy documents on sustainable development (see previous section). During the decade, a discussion paper, *The Forgotten Priority* (UNESCO, 2009) had proposed

developing a gendered approach to ESD strategic planning as a key step towards promoting gender equality.

b- Women's and Youth's empowerment: moving beyond the slogan:

For many decades, women's and youth empowerment has been a stated objective of educational policies and programmes, particularly those focused on adult literacy. Growing recognition that women's and youth's experiences and needs differ according to age, culture, ethnicity and education has challenged conventional development practices, which have tended to target women as a homogeneous group. There is now widespread recognition that 'empowerment means different things for women and youth in different situations' (UIL 2014, p. 3) and that education alone is rarely sufficient to generate such social and political change.

However, the tendency to think of 'women's and youth's empowerment' as an output rather than a process still persists, and this is reflected in the kind of research evidence used to analyse women's empowerment. Statistical measures of women's literacy, decision-making and economic participation have a greater influence on policy than ethnographic insights into how women's lives and identities are changing. As Sholkamy (in DFID 2012, p. 9) has suggested, we need to move beyond a mechanistic notion of women's and youth's empowerment to a deeper understanding of both policy and practice: for example, 'Women's empowerment is often treated by international agencies as something that can be designed as a policy blueprint, rolled out and scaled up. What actually happens when policy is conceived, negotiated and shaped may be altogether different'.

This relates also to our earlier discussion on the practical difficulties of implementing critical literacy pedagogies on a large scale and the unanticipated ways in which participants and staff may shape a programme at local level. Through participatory and ethnographic research, the Pathways of Women's Empowerment Programme (DFID, 2012) set out to listen to and learn about women's lived experiences. Aiming to move away from stereotypes, this approach to empowerment aimed to 'countenance contradictions and celebrate plural visions and versions of empowerment that fit with the contexts in which they are voiced' and framed empowerment as 'a journey not a destination' (Cornwall in DFID, 2012, p. 3).

Research evidence demonstrates that 'what works in one context to transform women's lives will not necessarily produce the same effects in another' (ibid, p. 9). This broader transformative model of women's empowerment has implications for how we view education for sustainable development, and, in particular, the significance of women organising for change.

Rather than taking formal education as the main vehicle for developing new capacities, skills, and aspirations, (as within ESD), Cornwall in the DFID, 2021, report prioritises informal learning. It draws on insights into how women are learning about new possibilities and gaining different experiences through, for example, watching TV, and the importance of women's organisations in developing relationships among women which support processes of empowerment. The notion of working 'with women's imaginations as well as with material aspects of their lives and for changing the way women see themselves and are seen by others' (ibid: 10) stands in sharp contrast to policy approaches which promote women's empowerment for more instrumental economic purposes.

Also, the process of youth empowerment is centered on the attitudinal, structural, and cultural dimensions of an individual whereby he/she gains the ability, authority, and agency for taking decisions and implementing change in his/her own life (Tope, 2011). It creates conducive environment for an individual by enhancing motivation to perform (Akintayo & Adiat, 2013).

The empowerment happens to be assured when youth come to realize there is enhancement in their abilities to control, influence or cope with their socio-economic roles. It not only covers economic empowerment but also takes social, ideological, educational, technological, and political empowerment in its ambit. It revolves around three key dimensions i.e. - i) economic, ii) social, and iii) political dimensions, which are the building blocks of youth (Punjab Youth Policy, 2012). Henceforth, it is the definite mean whereby young people are helped to realize success in life. Therefore, a significant amount of importance is attached with this concept by both, the nations, and the individuals, to secure the future prosperity for them as well as for the generations to come (Mike, 2014).

The bottom-up and process-orientated model of women's and youth's empowerment described here, like in the sustainable development approaches discussed earlier, has a focus on equity. There is a similar emphasis on the 'soft skills' required for women, for example to organise and move into new areas of economic and social action. However, in contrast to education for sustainable development, this approach to women's empowerment is informed by a notion of development and learning as spontaneous, unbounded processes and by recognition of the limitations of planned interventions with predicted outcomes. Although participatory teaching and learning approaches are promoted within ESD in order to develop skills of critical analysis and build confidence, participation is rarely considered in relation to larger questions concerning who decides what development means and whose values are promoted.

c- Towards a framework for analysing Education and Training in Sustainable Development: Empowerment of Youth and Women:

Through this discussion of sustainable development, Youth's and women's empowerment, several key aspects have emerged with regard to the kind of education that could support these two different but interconnected processes of change. The three dimensions of sustainable development – economic growth, social equality, and environmental sustainability – are situated within a framework of lifelong learning and discussed in terms of the new knowledge, skills, technologies, and values required by people. While recognising the need for gender parity in schooling, transformative approaches to youth's and women's empowerment move beyond formal educational institutions and programmes to consider how they women engage in different kinds of learning through the media, social organisation, migration, and work.

Soft skills, hard skills and/or green skills

There is growing recognition of the importance of developing soft skills within both Education for Sustainable Development and women's empowerment initiatives. Skill development should be broader than 'technical competencies' (UNESCO-INRULED, 2012, p. 13), and should encompass capacities such as communication, teamwork, creative skills and interpersonal behaviour. The concept of 'green skills' has also

been discussed in relation to soft skills. These can include leadership skills, adaptability to apply new technologies, environmental awareness (ibid, p. 30) and attitude change around the three Rs (reduce, reuse, and recycle) (UN, 2012b, p. 26). Young people in particular require such capacities to respond to the rapidly changing and increasingly risky rural agricultural environment, with ever shrinking access to land and resources (IFAD-UNESCO, 2014). However, soft skills alone are not sufficient. UNESCO-INRULED (2012, p. 22) calls for a 'multi-pronged approach' linking literacy skills, production skills (including some specialised green skills for new occupational categories), quality of life components and other support (such as access to credit or legal reforms around land ownership). This more holistic approach to skill development proposes the concept of a learning community, recognising that skill training occurs in 'formal, non-formal and on-the-job settings' (ibid, p. 10). Turning to youth's and women's empowerment; there have been proposals to explore 'new learning spaces for them, women' (DFID, 2012), in recognition that certain skill areas are strongly structured for their needs, and the needs to catch up on soft skills in a safe environment.

The question of 'which skills and whose knowledge?' are conveyed through a curriculum has been explored through research with women and points to the importance of participatory planning. Women in Palestine who had attended training on democracy complained in interviews with researchers: 'really we are bored from always hearing the same subject, communications workshop, democracy. Learning about our bodies would be better' (DFID, 2012, p. 18). A more participatory approach to developing skill development initiatives has also allowed providers to adapt to local market needs, thereby ensuring greater chance of employability.

A number of issues are emerging here, chiefly: the value of adopting a broad perspective on Education and Training, in sustainable development, and the need to consider hard and soft skills as interdependent, and to explore a range of soft skills through facilitating participatory planning approaches. Many programmes work from assumptions about their roles and interests, rather than by investigating their lived realities and visions for the future. It is also important to recognise that skill development alone is not enough: poor rural youths and women may also require access to credit, land, and supportive legislation.

Education, Training and Environmental Sustainability:

There should be training programmes that should incorporate environmental issues into an existing curriculum. This program should be targeted at non-literate women and youths and encourage peer learning, through literate and non-literate youth and women writing together in groups about their experiences and in their own languages. By building on indigenous and informal learning, the type of program should recognise youth and women's existing knowledge and helped them develop their roles and capacities through writing, editing, and publishing books for the children in their community.

The program should also introduce knowledge about new family laws, especially those concerning the status of divorced women. All three dimensions of sustainable development should be combined in this type of program, and by targeting a specific group of youth and women, to make it possible to address both their practical and strategic (longer term) needs.

For example, empowering Self-Help Groups in Kenya through ICT for Better Education and Alternative Livelihood Activities, was a programme ran by the NGO Coastal Ocean Research and Development in the Indian Ocean (CORDIO East Africa) and Avallain Ltd Kenya, teaches coastal communities how to preserve marine environments through ‘interactive community training units with literacy and environmental content’.

Working with Avallain, a social enterprise based in Switzerland which offers expertise in e-learning and e-publishing, the programme combined environmental issues with basic skills and ICT skills to foster employability.

‘Avallain Author’ software was used to develop simulated case studies focused on fishery, tourism, and the environment. The programme was based on the Swedish model of participatory learning in study circles known as folkbildning.

Women were provided with laptops, which proved popular as they could use them while sitting together on the ground rather than in a more formal classroom environment.

Participants learned to use computers to access the internet, record their sales and meetings, and make calculations – though some women struggled due to age and failing eyesight.

There were also issues concerning the inadequate infrastructure and high costs of implementing this programme in such poor rural areas. However, the project showed the potential for non-literate women to engage with new digital literacy, as a way of gaining knowledge about marine conservation and enhancing their livelihoods.

In contrast to projects such as these, which were all implemented within local communities, the NaDEET (Namib Desert Environmental Education Trust) Environmental Literacy Project set up an environmental education centre on the Namib Rand Nature Reserve in Namibia’s southern Hardap Region. Run by a group of environmental activists, the centre worked with both children and adults to provide hands-on experiential learning and the opportunity to reflect on their real-life experiences in relation to sustainable living and climate change.

The centre also produces publications, including the Bush Telegraph, a youth magazine covering environmental topics with a distribution of more than 18,000 (over half of the readership of the Namibian national newspaper). Their sustainability booklet series is also available to download in PDF versions.

This project aimed to engage a broad range of people – not only non-literate women. Through the booklets, participants can share what they have learned about ways of reducing pollution and living sustainably (for example, by making fuel bricks out of paper litter) with their family and community members when they return home. This approach has been constrained by a lack of resources to develop materials in indigenous languages.

Although environmental issues are the entry point of these projects, the first three case studies also show how social equality and economic activities can be incorporated into the programmes as integral to supporting environmental change.

With regard to youth and women’s empowerment, projects differ in how far they adopt participatory planning approaches and whether they recognise and start from

youth or women's existing gendered roles; or traditional literacy practices or set out to introduce new literacy practices or ways of learning especially in ICT.

Inter-sectoral collaboration was also key to several of these programmes – to ensure that literacy instruction was supported by the necessary technical expertise and resources (particularly the computer hardware and software in the Kenya project). What was striking in all these programmes was how intercultural learning was integral to facilitating change (through different knowledge, pedagogy, facilitators, and technology from outside the region).

Teaching Techniques that can be adopted in “Education and Training in Sustainable Development: Empowerment of Youth and Women”.

Quality Education:

UNESCO has identified ten key aspects that support quality education related to the individual learner and to systems of education. Five of these aspects are at the level of the learner, including:

- Seeking out the learner.
- Acknowledging the learner's knowledge and experience.
- Making content relevant.
- Using many teachings and learning processes, and
- Enhancing the learning environment (UNESCO, 2005).

By using a variety of teaching techniques, teachers help pupils employ and develop different learning processes. With variety, pupils have a chance to grow as learners and to enhance their skills and capacity to learn and think.

A quality education implies that the needs of individual learners will be considered and addressed in developing and delivering lessons. By using a variety of teaching techniques, the teacher attends to the diverse needs of the pupils in the class. Not all students learn in the same way. Some prefer to listen, others to read, and still others to participate more actively. Unfortunately, traditional pedagogies mainly serve pupils who are good at listening, reading, memorizing, and sitting still; however, not all pupils have these abilities. Yet education is for all.

Meeting the learning needs of all pupils in the classroom is a form of social equity, which is a core concept of sustainability. For many years, the educational community did not link teaching techniques with social equity. Previously, only the pupils who were good at reading, memorizing, and reciting excelled in school. Those pupils who were did not thrive in school and often dropped out, thereby limiting their careers and economic potential. Dropping out of school is a major social and economic sustainability issue. However, using a variety of teaching techniques to meet the learning needs of pupils can address equity in the classroom. Such practice also demonstrates to the pupils a form that equity and social sustainability can take. Pedagogies used in school, like other educational practices (e.g. a whole-school approach to sustainability), can therefore promote principles of sustainability.

Another form of equity inherent in sustainability that is visible in the classroom is related to gender. Considering that men and women, particularly in rural and

indigenous societies, tend to have quite different socio-cultural roles, classroom teaching techniques need to be employed in locally relevant and culturally appropriate ways that foster gender equity. The same is true for access to educational resources for both youth and women.

Education for Sustainable Development Pedagogies:

Pedagogies associated with ESD stimulate pupils to ask questions, analyse, think critically, and make decisions. Such pedagogies move from teacher-centred to student centred lessons and from rote memorization to participatory learning.

Education for Sustainable Development Pedagogies are often place-based, or problem/issue based. Education for Sustainable Development Pedagogies encourage critical thinking, social critique, and analyses of local contexts. They involve discussion, analysis, and application of values. Education for Sustainable Development Pedagogies often draw upon the arts using drama, play, music, design, and drawing to stimulate creativity and imagine alternative futures. They work towards positive change and help pupils to develop a sense of social justice and self-efficacy as community members.

The following are descriptions of and sample activities for four teaching techniques: simulations, class discussions, issue analysis, and storytelling. Each technique stimulates different learning processes.

1. Simulations:

Simulations are teaching/learning scenarios in which the teacher defines the context in which the pupils interact. The pupils participate in the scenarios and gather meaning from them. For example, pupils imagine they live in a small fishing village and have to learn how to manage the fishing stocks sustainably (i.e. without depleting the fishing stocks or starving the people). Often, simulations are simplifications of complex abstract concepts. At the same time, because they are distillations of real-world situations, simulations give a sense of reality and thus engage and motivate learners of all ages.

Why?

Concepts associated with sustainability are often abstract and complex. Simulations reduce complexity and highlight salient aspects. Simulations give concrete ways to teach abstract concepts. Providing concrete examples for abstract concepts is especially important for children and adolescents, many of whom are still in the concrete stages of cognitive development.

Connection to ESD Pedagogies

Simulations:

- Engage pupils with visual, auditory and tactile-kinesthetic learning modalities, thereby promoting equity.
- Address real life problems that face communities and add relevance to the curriculum.
- Promote higher-order thinking skills.

How?

Teaching using simulations involves:

- Teaching academic concepts related to the simulation.
- Describing the context of the simulation.
- Explaining the rules of the simulation.
- Monitoring the activities of the pupils as they engage in the simulation and gently redirecting if necessary, and
- Reflection on the simulation and relating it back to the concepts.

The reflection is important in reinforcing the academic concepts.

2. **Class Discussions:**

Class discussions allow for the transfer of information amongst pupils and from the pupils to the teacher, in addition to the traditional route from teacher to pupils. Pupils come to the classroom with a wide variety of life experiences that can enrich the teaching of the mandated curriculum. Pupils can therefore contribute a great deal to discussions of sustainability with observations from their neighbourhoods about what is sustainable and what is not. Teachers can then incorporate these experiences into their lessons through class discussions that provide pupils with real life applications of concepts.

Why?

One of the skills that ESD develops is the ability to communicate orally and in writing. Discussions give pupils opportunities to develop oral communication skills (e.g. developing focus and purpose before speaking, active listening, building on the ideas of others, summarizing, and questioning). Pupils with strong auditory learning modalities learn well from discussions, both from listening and expressing their own ideas.

Connection to ESD Pedagogies:

Classroom discussions:

- Are student-centred – (Youth and Women)
- Stimulate pupils to analyse and think critically, and
- Promote participatory learning.

How?

Class discussions require planning as with other types of teaching techniques. Discussion can be built into a lecture or around a list of questions, a problem to solve, a plan to be made, or an activity to be completed. All of these require verbal exchanges among group members. Discussions can take a variety of forms. Large-group discussions involve the whole class; small-group discussions just two to six pupils. Discussions can be teacher-led, pupil-led, or interactive. Discussions do require setting and enforcing ground rules (e.g. one person speaks at a time while the others listen).

Teachers can use discussions to assess pupil knowledge and application of the three spheres of sustainable development – environment, society, and economy. Sometimes one of the aspects is obvious (e.g. recycling aluminium is good for the environment because it conserves energy), but others might not be as obvious (e.g.

recycling is good for the economy because it employs people, and recycling is good for society because the city government does not have to spend as much on garbage collection and disposal and can therefore allocate the money for other priorities and needs, for example education).

3. **Issue Analysis Techniques:**

Issue analysis is a structured technique for exploring the environmental, social, economic, and political roots of problems that face communities. Issue analysis helps pupils identify major arguments related to a community problem as well as key stakeholders and their perspectives, goals, and assumptions related to that problem. Issue analysis also looks critically at the proposed solutions and the costs— financial and otherwise—and at who will bear those costs. Issue analysis can be done briefly or in depth. Issue analysis is interdisciplinary, bridging the natural and social sciences.

Why?

Sustainability is an over-arching paradigm that encompasses environmental, social, economic, and political problems and issues that face communities around the world. When the pupils of today assume positions of leadership and become voters, they will have to deal with complex issues that have no simple answers. While in school, they should develop the tools and frameworks for thinking in a way that will help them untangle the complexities of sustainability issues that face their communities. They will also need to learn to create solutions that are locally appropriate and at the same time keep in mind global consequences (e.g. cleaning up local pollution without shipping toxic and hazardous waste to another country). Issue analysis guides pupils through a process that can be used with any issue. It is a generic process that can be applied to a wide range of environmental, social, and economic problems.

Issues analysis also gives pupils a way to come to grips with the feeling that something is not quite right in their own community and in communities around the world, but that they do not yet have the skills to explore. Pupils today come to school with broad exposure to the media. These media put them in contact with people outside their neighbourhoods and around the world. Additionally, media expose them to excessive wealth and grinding poverty as well as many other inequities in the world. Pupils hear seemingly contradictory facts, for example, that people have never been wealthier and yet more than a billion people around the world live on less than one US dollar per day.

Connection to ESD Pedagogies:

Issue analysis:

- Brings relevance to the curriculum.
- Promotes higher order thinking skills and critical thinking skills.
- Promotes decision-making (e.g. evaluating which proposed solution is best).
- Promotes thinking about the future.

How?

Issues analysis begins with naming an issue or problem and being able to clearly define it. Several good issue analysis frameworks appear in the educational literature. Two frameworks, which are based on lists of questions to ask about an issue, are featured in the sample activities section. Pupils answer the list of questions for a community issue or problem. Issue analysis can be done individually, as a small group or as a class.

4. **Storytelling Telling:**

Stories to convey and illustrate sustainability ideas is an engaging form of teaching. Stories can be taken from current events, history, television programmes, literature, drama, and personal experience. Storytelling also draws on the oral traditions of indigenous societies and folk art. Storytelling has been practised for generations as a means of entertainment, education or cultural preservation and to instil moral values among younger generations. Storytelling is an effective ESD pedagogy as the values reflected in traditional stories often contain the wisdom of the elders or stem from creation stories, which helps to impart respect for cultural heritage as well as the environment.

Why?

Storytelling makes ideas, theories, and concepts learned from textbooks come alive. Storytelling adds a human element to otherwise dry information. This enables teachers to better transmit sustainable development information, principles, and values to pupils. Storytelling is especially good for pupils whose preferred learning modality is auditory. Remembering a list of isolated concepts and definitions is difficult but recalling the flow of a story related to these concepts may be easier for pupils. A story may also provide a non-threatening way to ease pupils into learning. Stories engage people of all ages and abilities.

Connection to ESD pedagogies

Storytelling:

- Links to traditional and indigenous knowledge and passes wisdom from one generation to the next.
- Engages learners with cultural heritage and the fourth dimension of sustainability, culture.
- Connects with auditory learners, who are not fully engaged in classroom based on learning from textbooks, to address issues of classroom equity.
- Incorporates principles, perspectives, and values related to sustainability.

How?

A lesson can be structured with a storytelling component that illustrates the academic content or adds a sustainability component to the lesson. For example, predator-prey relationships can have a sustainability twist by telling a story of the unintended consequences of the introduction of non-native species (e.g. rabbits into Australia). Rather than progressing through the material fact by fact, this may be told within a story structure built on a plot with an initial situation, conflict, complication, climax, suspense, resolution, and conclusion. With practice, the pace of a story can be varied, and suspense built through pauses to draw pupils' attention.

A variation of this lesson plan is, instead of providing the resolution to a story, asking pupils to imagine it, thereby allowing pupils to develop problem-solving and critical thinking skills. Teachers can ask questions such as:

- What do you imagine happens next? How is that a logical extension to the story? What do you think could have happened if...?

Bringing the story back to the content of the lesson and the theme of sustainability is important. Teachers can ask, for example, how does this story illustrate sustainability and its principles and values? Openly linking the story to the class content is important. Although the tie between the story and the content is obvious to the teacher, it may not be so to the pupils.

5. Combining Teaching:

Many other teaching techniques that engage pupils in participatory learning and high-order thinking skills exist. The Internet is full of lesson plans based on different teaching and learning techniques. Part of the challenge is having a coherent plan to use a variety of techniques to achieve learning goals (e.g. fostering both independent and collaborative learning) as well as teaching the content of the mandated syllabus. The ESD Lens Review Tool 8: Teaching and Learning Strategies is designed to help teachers balance teacher-centred and learner-centred approaches as well as examining how these approaches can be combined in an ESD learning process.

3- FACTORS HINDERING EDUCATION AND TRAINING IN THE EMPOWERMENT OF WOMEN AND YOUTH FOR SUSTAINABLE DEVELOPMENT

According to A. A. Lugga and E. A. Umoh in their paper presented at the 13th International Conference and Exhibition on Power and Telecommunication (ICEPT 2017), Abuja, Nigeria, 9th – 13th October 2018 titled TVET Institutions, Sustainable Development Goals and Women and Youth Empowerment in Rural Zamfara North, Nigeria; Several non-technical factors collude to rob women and youth of opportunities for economic empowerment such as; Lack of initiatives towards entrepreneurial idea generation and skill development, Sociocultural belief on gender inequality, Language barrier, Lack of access to information, Perception of TVET among the youth, Lack of accountability and commitment among Non-Governmental Organizations (NGOs), Stakeholders and partners.

1- Lack of initiatives towards entrepreneurial idea generation and skill development

Attention has often been focused on the supply side of empowerment without examining the attitude of expected beneficiaries on the demand side. It is apt to say that many youth have little or no interest in sustainable development and empowerment in spite of their deplorable conditions. Many youth in the rural areas are nonchalant to skill development and education. Consequently, government spends much resource to coerce them to enroll in schools or empowerment programmes. The resources expended to attract these youth to

school in the form of scholarships, school fees, examination fees and sundry allowances are enormous in our societies.

2- Sociocultural belief on gender inequality

Strong cultural and religious beliefs still hold sway in the study areas. In spite of the proliferation of technologies and minimal access to information, many women still prefer to stick to the status quo, in uncompromising allegiance to cultural beliefs. The struggle for gender equality is perceived differently by conservative custodians, and any push may anti-climax in rigid re-enforcement of cultural standards on genders.

3- Language barrier

In rural communities, native tongues are the preferred Mode of communication. Thus, many women and youth of school age do not make spectacular effort at learning the English language which is the medium used for western education. This has added to the difficulty of teaching unschooled women and youth using the English language medium. This is particularly difficult when there is the need to cap practicals with theories during skill acquisition training by trainees who are alien to written and spoken English.

4- Lack of access to information

Lack of internet access in rural areas and the sub-optimal utilization of television channels by local and State licensed stations cuts out educative channels from the reach of the poor who can only afford these media. Also among rural people with access to cable televisions, most are likely to consume entertainments and recreational products than viewing discovery channels with educative and entrepreneurial contents.

5- Perception of TVET among the youth and the government

In many Africa countries, TVET is still considered by parents and public at large including governments, parliamentarians, political parties, and the youth as the domain for less academically gifted or endowed students (AU, 2007).

In spite of the repositioning efforts of governments through improved capital investments in training facilities for staff and students of tertiary institutions and special training institutes coupled with the phraseological shift from “labour job” to “entrepreneurship” (Lugard and Umoh, 2014), many youth still show aversion to TVET as in their estimate, it is not a “shortcut” to instant wealth. This has slowed down government efforts aimed at scaling up enrolment in technical education which could have salutary effects on youth empowerment.

6- Lack of accountability and commitment among Non-Governmental Organizations (NGOs)

The primordial interests of many NGOs (some of which are predatory) are not in consonance with the core objectives of governments and donor bodies who bankroll their activities. It may not be uncomplimentary to say that many NGOs, partners and private sectors are opportunistic and partisan in the discharge of their self-imposed responsibilities to the society.

7- Lack of opportunity

A ready answer to the cause of poverty and lack of empowerment that has become a buzzword among development experts is lack of aptitude or exposure to education. The lack of opportunity is a major reason for poverty and unemployment among the teeming millions of youths. Many of the unemployed youths are graduates of tertiary institutions while others have acquired necessary certification in various trades, yet have no enabling environments to translate their aptitudes into income-generating activities. Closely related to this, is the lack of access to microfinances among women and youth. This has hindered the acquisition of finance and equipment that could help trainees to kick-start their businesses where there are opportunities. The lack of booming market for selling entrepreneurial products also has a telling effect on the continued interest of the women and youth in enrolling for trainings and this comes with the collateral issues of youth restiveness and involvement in unwholesome activities to fill the vacuum created by lack of constructive energy channels.

4- STRATEGIES PUT IN PLACE BY THE AFRICAN UNION TO STRENGTHEN AND ENHANCE EDUCATION AND TRAINING FOR THE EMPOWERMENT OF WOMEN AND YOUTH FOR SUSTAINABLE DEVELOPMENT

From the above mentioned factors hindering the possibilities for African women and youth to grab the opportunities of economic empowerment and sustainable development, the African Union has set up policies and strategies aimed at achieving inclusive and sustainable development. Agenda 2063⁵, Africa's blueprint and master plan for transforming Africa into the global powerhouse of the future is the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development and it is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African Renaissance.

This blueprint framework carries seven strong aspirations with Aspiration 1, 5 and 6 making reference to the importance of educating, training and empowering the Women and the youth.

Aspiration 1: A prosperous Africa based on inclusive growth and sustainable development

The African Union in this aspiration is determined to eradicate poverty in one generation and build shared prosperity through social and economic transformation of the continent.

Goals of Aspiration 1 are;

- A high standard of living, quality of life and well-being for all with focus of ending poverty, inequalities of income and opportunity; job creation, especially

⁵ <https://au.int/en/agenda2063/overview>

addressing youth unemployment; facing up to the challenges of rapid population growth and urbanization, improvement of habitats and access to basic necessities of life – water, sanitation, electricity; providing social security and protection;

- Well educated citizens and skills revolutions underpinned by science, technology and innovation by developing Africa's human and social capital (through an education and skills revolution emphasizing science and technology)
- Healthy and well-nourished citizens by expanding access to quality health care services, particularly for women and girls;
- Transformed economies and jobs by transforming Africa's economies through beneficiation from Africa's natural resources, manufacturing, industrialization and value addition, as well as raising productivity and competitiveness
- Modern agriculture for increased proactivity and production by radically transforming African agriculture to enable the continent to feed itself and be a major player as a net food exporter;
- Blue/Ocean Economy for accelerated economic growth by exploiting the vast potential of Africa's blue/ocean economy;
- Environmentally sustainable climate and resilient economies and communities by putting in place measures to sustainably manage the continent's rich biodiversity, forests, land and waters and using mainly adaptive measures to address climate change risks

Aspiration 5: An Africa with a strong cultural identity, common heritage, shared values and ethics

Pan-Africanism and the common history, destiny, identity, heritage, respect for religious diversity and consciousness of African people's and her diaspora's will be entrenched.

Goal of Aspiration 5:

- Africa cultural renaissance is pre-eminent by inculcating the spirit of Pan Africanism; tapping Africa's rich heritage and culture to ensure that the creative arts are major contributors to Africa's growth and transformation; and restoring and preserving Africa's cultural heritage, including its languages.

Aspiration 6: An Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children.

For the African Heads of States and governments, all the citizens of Africa need to be actively involved in decision making in all aspects. Africa shall be an inclusive continent where no child, woman or man will be left behind or excluded, on the basis of gender, political affiliation, religion, ethnic affiliation, locality, age or other factors.

The Goals of Aspiration 6 is to;

- Achieve full gender equality in all spheres of life by strengthening the role of Africa's women through ensuring gender equality and parity in all spheres of life (political, economic and social); eliminating all forms of discrimination and violence against women and girls;
- Engaged and empowered youth and children by creating opportunities for Africa's youth for self-realization, access to health, education and jobs; ensuring safety and security for Africa's children, and providing for early childhood development.

To achieve these aspirations, African Heads of States and governments, developed strategies to ensure the Education, Training and Empowerment of Women and Youth. Some of these strategies are; the Continental Education Strategy for Africa to run from 2016 to 2025 (CESA 16-25), the African Union Continental Technical and Vocational Education Training (TVET), the Science, Technology and Innovation Strategy for Africa (STISA 2024) and many more.

a- **The Continental Education Strategy for Africa (CESA 16-25)**

The mission⁶ of CESA 16-25 is Reorienting Africa's education and training systems to meet the knowledge, competencies, skills, innovation and creativity required to nurture African core values and promote sustainable development at the national, sub-regional and continental levels. This Strategy has strategic objectives articulated by a set of high-level results that the CESA 16-25 will aim to achieve by 2025 in order to fully reorient African education and training systems towards the achievement of the AU's vision and Agenda 2063. Under each strategic objective a set of intermediate-level goals, that can be called action areas (AAs), are provided in order to specify the critical elements and results the CESA 16-25 must accomplish before achieving the strategic objectives (see AU CESA 16-25). The Strategic Objectives are;

- Revitalize the teaching profession to ensure quality and relevance at all levels
- Build, rehabilitate, preserve education infrastructure and develop policies that ensure a permanent, healthy and conducive learning environment in all sub-sectors and for all, so as to expand access to quality education
- Harness the capacity of ICT to improve access, quality and management of education and training systems
- Ensure acquisition of requisite knowledge and skills as well as improved completion rates at all levels and groups through harmonization processes across all levels for national and regional integration
- Accelerate processes leading to gender parity and equity
- Launch comprehensive and effective literacy campaigns across the continent to eradicate illiteracy
- Strengthen the science and math curricula and disseminate scientific knowledge and the culture of science in the African society

⁶ https://au.int/sites/default/files/documents/29958-doc-cesa_-_english-v9.pdf

- Expand TVET opportunities at both secondary and tertiary levels and strengthen linkages between the world of work and education and training systems
- Revitalize and expand tertiary education, research and innovation to address continental challenges and promote global competitiveness
- Promote peace education and conflict prevention and resolution at all levels of education and for all age groups
- Build and enhance capacity for data collection, management, analysis, communication, and improve the management of education system as well as the statistic tool, through capacity building for data collection, management, analysis, communication, and usage.
- Set up a coalition of all education stakeholders to facilitate and support initiatives arising from the implementation of CESA 16-25.

b- The African Union Continental Technical and Vocational Education Training (TVET)

The TVET strategy provides a guide for the building of the TVET national, regional and continental ecosystem. Historically, TVET has suffered as a “second choice” education in African countries. However, the success of African economies significantly depends on growing skilled, technical and innovative workforce with a prime focus on value-added manufacturing sectors. This because industrialisation is a veritable strategy for changing Africa’s debilitating situation as huge consumers of imported products to become producers of manufactured goods, thus generating jobs and wealth. Furthermore, entrepreneurship education and training in African TVET institutions should go beyond establishing SMEs to acquiring the knowledge and innovative skills to grow small businesses into much bigger enterprises. Thus the AU Continental TVET Strategy offers a comprehensive framework for the design and development of national policies and strategies to strengthen TVET for increased labour productivity, job and wealth creation, poverty reduction and youth empowerment.

c- The Science, Technology and Innovation Strategy for Africa (STISA 2024)

This strategy is designed to respond to the need of transforming Africa into a knowledge-based and innovation-led Society (AU STISA 2024). It reflects the AU vision and takes into account priorities identified for the continent, and contained in various AU sectoral frameworks. The strategy further fosters social transformation and economic competitiveness, through human capital development, innovation, value addition, industrialisation and entrepreneurship. In pursuing this vision, the African Union emphasizes the importance of “building our universities as centres for excellence, as exemplified by the Pan African University” (AU STISA 2024).

CONCLUSION

Facing existing and emerging challenges that the world and Africa are confronted, there is a need for our leaders to design and build an effective response of education and training systems through promotion of knowledge, skills and qualifications for sustainable development of Africa. The success of our continent's sustainable development should be inclusive to pave the way for substantive reforms we need to transform our educations and training systems taking into account the gender dimension and strengthening Africa's human capital. The reason why AU developed TVET strategy. TVET indicators combine all critical factors (Social, economic and environment) of the Sustainable Development to provide a snapshot of empowerment.

Africa cannot afford to miss the opportunities presented by the 4th industrial revolution even more as the COVID-19 health pandemic is predicted to aggravate the already pre-existing vulnerabilities and risks of communities with long-term shadow repercussions especially, in Education particularly for girls and women.

Financing education, life-long learning, training, health, water, entrepreneurship especially for our youth and women are key factors in advance the Africa Agenda 2063 for a sustainable development and the 'Africa We Want'. AU/CIEFFA thus organises regular capacity-building workshops with the young women and men in STEM, digital literacy, young entrepreneurship, financial education, fighting against gender-based violence, teenage pregnancy and early marriage, terrorism, climate change.

Furthermore, data is a critical component in assessing education quality as well as the participation of women and girls in teaching and learning. And IPED is mandated by African Union heads of states and governments to support education ministries in strengthening national education data systems, towards responding to national, regional (CESA 16-25) and global priorities (SDG 4). For the 50 indicators of the CESA indicators manual, we continue to ensure that disaggregating all data received by gender, to further expose how women and girls are affected, is a top priority for the African Union.

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