

Andreas J. Obrecht (Ed.)

# APPEAR METAREFLECTIONS

From Transcultural and Transdisciplinary  
University Cooperation to Critical Epistemological  
Analyses of Knowledge Production

**StudienVerlag**

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Innsbruck  
Wien

APPEAR is funded by the Austrian Development Agency (ADA) as part of International Partnerships Austria and is implemented by OeAD – Austria's Agency for Education and Internationalisation.

 Austrian  
Development  
Agency

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International  
Partnerships  
Austria

© 2026 by Studienverlag Ges.m.b.H., Erlenstraße 10, A-6020 Innsbruck  
E-mail: [order@studienverlag.at](mailto:order@studienverlag.at)  
Internet: [www.studienverlag.at](http://www.studienverlag.at)

Media owner: OeAD-GmbH – Agency for Education and Internationalisation  
Ebendorferstraße 7, A-1010 Wien

Typesetting and cover: Studienverlag / Maria Strobl – [www.gestro.at](http://www.gestro.at)  
Proofreading and copy editing: Dan Brown, Irmgard Schmolz

Printed on acid-free and chlorine-free bleached paper.

Bibliographic information published by the Deutsche Nationalbibliothek  
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie;  
detailed bibliographic data are available at <https://dnb.dnb.de>.

ISBN 978-3-7065-6916-3

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# I Introduction



Andreas J. Obrecht

# Metareflections and Metacontexts in Transnational and Transcultural Knowledge Production

## Entering a World Without Problems

In November 2025 the team of the Austrian Partnership Programme in Higher Education and Research for Development (APPEAR) hosted the 15th Forum of the Cooperation for Sustainable Development in Higher Education Group (S-DHG). More than 60 representatives of funding institutions spent two days in Vienna to exchange experiences and reflect on their professional work against the backdrop of national and geopolitical changes, as they do every year. As the head of the higher education cooperation program APPEAR at Austria's Agency for Education and Internationalization (OeAD) the author of this chapter had the honor of delivering the opening remarks. These included the fact that the APPEAR team had already hosted this conference in Vienna nine years ago, nine years in which the world and access to knowledge have changed fundamentally:

*It has now been nine years since I expressed some thoughts about knowledge and knowledge production at the last S-DHG meeting that we, the OeAD, had the honor to host. Based on my book (Why want to know? A contribution to the discourse of knowledge from a cultural and knowledge sociological perspective) that had just been published at the time I considered the tricky question: "Does knowledge emerge when knowledge is needed?" This is a rhetorical question from the book, one that really seems important to me. This question can be read as a kind of socio-cultural mirror in which we can see ourselves and the societies we live in from a different angle.*

*My answer to this very important question nine years ago was first YES, then NO and finally YES and NO. I would like to briefly recapitulate the arguments as to how this came about.*

*Of course, the simplest answer to this question is YES! Human beings are creative and solution-oriented creatures, and they will always find ways to cope with problems once they have identified them; no matter where and when they are living, they can and they will solve the problems they face ...*

*The less simple answer to this rhetorical question is NO! We have proven to be an enormously destructive species – tremendous successes in knowledge production have led to the exhaustion of our natural resources, to climate change, to new conflicts, and to war-induced crises. There is no evidence that the knowledge already gained – particularly since the beginning of the industrial age – is knowledge that will ensure a long-lasting sustainable life for Homo sapiens on this planet. It often seems to be the contrary.*

*Finally, nine years ago, I found a more sophisticated answer to the question, “Does knowledge emerge when knowledge is needed?” I proclaimed: “YES and NO!” Or rather: “WE SIMPLY DO NOT KNOW!” As long as we know almost nothing about the interconnectivity, the interlinkages, the dependencies, as long as we do not know the quality of the relationship between the problems that have been identified and the ability to generate knowledge to solve these specific problems, we cannot answer this crucial question. Moreover, as long as we are not able to answer this question we can only say little about our future, about the future of our species. If the ability to identify phenomena as problems depends causally on the ability to solve these problems, we can probably create a bright and sustainable future. By contrast, if the knowledge that is needed to solve a problem has nothing to do with the ability to identify a problem as a problem, we will probably be lagging behind with our problem-solving abilities for many decades, if not centuries.*

*So, nine years ago, I stated that we cannot say whether problem awareness is causally linked to problem-solving capacity. Today, nine years later, this discussion is dramatically different. Because it is no longer a question of whether we can solve problems that we recognize through our knowledge and skills but whether we even want to perceive problems that we know about. Perceiving reality ... We not only live in a world in which deliberate distortion of facts, alternative facts, and even lies have gained political and social weight but in which problems – the empirical evidence of which we are aware – are simply negated, hushed up, and made invisible. If climate change does not exist, we do not need to do anything about it; if there are no significant economic and social inequalities between the sexes, we do not need to worry about gender equality; if a war of aggression is not called a war of aggression, there is no need to establish peace; if poverty in the Global South*

*is not recognized as a problem, we no longer need development cooperation based on values. Agencies like USAID can be closed overnight, and more than 60 billion dollars will not be missed because there is no problem with poverty when we do not talk about poverty as a human crisis or as a scandal that is no longer recognized in the rich world of one-fifth of the world's population. The negation of problems has a lot to do with language. And the new language of problem negation, which was not spoken nine years ago, leads to a fundamental devaluation of knowledge because knowledge no longer needs to be generated to solve what is no longer recognized as a problem ...*

*This devaluation of knowledge inspired a befriended, well-known artist, Gerlinde Thuma, and me to create the art project "Knowledge Goes Nature." More than five years ago, 1,800 books representing more than two tons of knowledge were turned into a sculpture in the middle of a beautiful forest.<sup>1</sup> It has been shown that knowledge is indeed permanent, perhaps more permanent than we sometimes believe – although the sculpture has changed its structure it will take many years before this knowledge actually disappears. Slowly, very slowly, my words, sentences, and thoughts are transformed page by page within the wisdom of nature.*

*Today the title of my book had better be: Why not want to know? Perhaps this is because the problems have grown beyond our control and all our technological and civilizational knowledge has failed to help solve them. Are we taking refuge in a world without problems, which makes the generation of knowledge relevant to problem solving obsolete? Have we abolished problems so as not to be crushed by the problems of our human existence? Meanwhile we are waking up again and again in a world without problems, or in one in which problems can no longer be answered with knowledge and therefore no longer appear as problems. Here it is again, this time completely different: Our brave new world!*

*Ladies and gentlemen, dear colleagues: "Knowledge Goes Nature" and my conclusion is not a capitulation; it is a sign, a symbol for trends and tendencies going on all over the world. The tendency is to forget or negate evidence-based knowledge – for one's own political, economic, and personal advantage. We have gathered here to practice a different approach. We want to use our experiences, our thoughts, and our evidence-based knowledge to exchange ideas and find solutions to foster Cooperation for Sustainable Development in Higher Education. In this sense I wish you and all of us an inspiring conference.*

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1 [www.gerlindethuma.at/work-copy/knowledge-goes-nature/](http://www.gerlindethuma.at/work-copy/knowledge-goes-nature/)

## Diversity and Self-Reflexivity

The Trump administration's attack on US universities, skepticism toward science and rational explanations of the world, denial of climate change, and attempts to establish authoritarian structures are causally related and reinforce each other. Scientific knowledge results from questioning explanations of reality. Scientific knowledge, evidence-based knowledge about the world, is a consequence of methodical doubt about what we believe we know about the world and its components, and thus also about ourselves. Authoritarian structures define reality as the rulers want it to be and have no interest in being questioned. Authoritarian structures and knowledge production are mutually exclusive in a certain sense; authoritarianism is careful to ensure that not too many questions are asked. If necessary, the authoritarian definition of reality must be enforced by force – in such structures, those who think differently are always first disparaged, then ostracized, finally persecuted, and ultimately silenced. Evidence-based knowledge needs freedom! It needs free spaces for language, free spaces for criticism, doubt, questioning, and discourse! Scientific knowledge always wants to think beyond itself – just as one's own actions and role as a researcher are critically reflected upon, so too are the spaces of knowledge constantly traversed in a reflexive manner. This is dangerous for those who believe they know what the world consists of and what their role in it is.

We have chosen the title “Metareflections” for this publication to emphasize that a funding program such as APPEAR is part of a tradition of knowledge production that is not done for its own sake but has societal, social, and normative prerequisites and consequences. As expressed in the fourth sustainable development goal, we see education and knowledge as the basis for sustainable development, which should secure the future of our planet and promote peaceful coexistence between people, cultures, and nations. The universalist claim of self-reflexive knowledge production is rooted in genuinely European experiences, which in turn emerged from the examination of philosophy and science from antiquity. In the following, aspects of diversity and self-reflexivity will be briefly presented and then explored in more depth in the context of the tasks of responsible development research.

Europe owes its centuries-long hegemonic dominance also to its culturally creative ability to reinterpret a wide variety of non-European knowledge systems, technologies, philosophies, and epistemologies and to apply them to the “inside” and “outside” based on newly emerging social needs. This culturally creative approach was not only a component of maintaining and expanding power but also a cultural learning and expe-

rience process that fundamentally changed the structures of European societies again and again. After the devastation of two catastrophic wars in the 20th century and the division of Europe by the Cold War, Europe has been trying to reinvent itself, especially since the geopolitical turning point in 1989. Russia's war of aggression in Ukraine and the threatened withdrawal of the US from Europe as a protective power and strongest NATO partner have intensified this search for identity and a new geopolitical role immensely.

In view of these challenges in the fields of education, knowledge generation, and research, Europe's great strength lies in the multivariable structures on which European societies are based. European societies are multilingual, multiethnic, multireligious, and culturally extremely diverse. A multitude of different knowledge horizons and historically divergent knowledge experiences form the intellectual humus of this alliance of nations. Europe's greatest weakness in terms of education strategy is that it is not sufficiently aware of this extraordinary potential for knowledge generation. Despite forward-looking programs such as Erasmus+, calls for isolation and isolationism are becoming louder, especially in times of "crisis." Science, however, cannot be pursued in a "Fortress Europe" – because science needs open borders. Instead of involving people from all over the world in the European experiment of liberal knowledge production, learning from them and benefiting from them – which would be necessary for demographic reasons alone – political rhetoric invokes a European "identity" and "homogeneity" that does not exist, has never existed, and cannot exist.

Europe must neither neglect its strengths nor sacrifice them to a false notion of intra-European "homogeneity." Besides its practiced diversity, one of Europe's great strengths is its self-reflexivity, which has been practiced for centuries in its dealing with knowledge. The modern paradigm of empirical science was followed by the social and emancipatory demands of the Enlightenment, which in turn were coupled with considerable skepticism toward the general judgment of what had been "scientifically" proven. Criticism of religion, rebellion against absolutist, feudal, autocratic, and later nationalist tendencies were just as much part of the repertoire of this notorious self-reflexivity as the antiauthoritarian movements of the 1960s and 1970s, the search for alternative ways of life, and the demand that knowledge should not be generated for its own sake but for the benefit of humanity. Europe has always distinguished itself in its own thinking about itself by refuting itself; the search for falsification of currently valid knowledge has always been in the foreground – not the search for confirmation of what was once thought. This notorious self-reflexivity

has led to the idea that in European thinking knowledge is something that must be constantly reexamined in a social, ethical, and fundamentally epistemological context.

## The New Practice of Knowledge

Europe has continuously cultivated a self-reflective culture of knowledge for centuries. At the same time Europe has used its knowledge, and thus its technological advantage, with extreme brutality to enslave entire peoples and colonially exploit up to 80% of the world's territory.<sup>2</sup> Nevertheless, the European knowledge landscape differs significantly from others. Due to the complexity of the upcoming "global challenges," it is today more important than ever that holistic and self-reflective methodologies and analyses find their way into the globalized knowledge discourse. Here a new practice of knowledge based on European scientific traditions can make decisive contributions. Moreover, this scientific tradition continues to raise questions about the normative and ethical assessment of scientific activity and the exploitation of scientific results. In view of the destructive potential created over the last 150 years, partly because of scientific discoveries, this is also a question of survival.

The quantitative expansion of knowledge, which sometimes leaves us adrift in an "ocean of knowledge," will be followed, or must be followed, by a qualitative revolution in knowledge. This qualitative revolution in knowledge, the "new practice of knowledge," will be based on four foundations. Two of these foundations can be derived from the history of science as well as from the threatening problems that the world faces. The third foundation is a novelty in the history of science and marks the end of Western science as a function of colonial and postcolonial appropriation and exploitation of non-European spaces. And the fourth foundation concerns the digital revolution through artificial intelligence.

- The "new practice of knowledge" will recognize a higher priority in the intertwining of knowledge than in the generation of individual scientific results. Knowledge that is defined as nonscientific for formal and epistemological reasons – aesthetics, art, ethics, spirituality, action orientation, culturally transmitted indigenous knowledge, etc. – will play

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2 At the end of the 19th century, 80% of the world's territory was under "European" control – if we include the independent American territories and the Tsarist internal colonization.

an important part in the evaluation of the quality of scientific findings. This “holistic approach” analyzes the complexity of multidimensional knowledge spaces and their systemic interconnection.

- The “new practice of knowledge” will be based on a new contract between science and society – at least as far as publicly funded research and scientific work are concerned. The basis of this social contract will no longer be the “autonomy of sciences” but rather the responsibility that scientists assume in society through scientific research. This will lead to maximum transparency, accessibility, and practical application of the results generated.
- The “new practice of knowledge” will no longer have its centers predominantly in the European-Anglo-American world; the centers of many future-oriented sciences will shift to Asia in line with geopolitical and demographic changes. This development will particularly affect the following scientific disciplines: biotechnology, nanotechnology, engineering, genetic engineering, computer science, and, to some extent, energy science.
- The “new practice of knowledge” will benefit from the emerging digital revolution in two ways: Firstly, in the self-confident critical distinction from inadequate and only seemingly reliable knowledge generation, and, secondly, in the use of digitally connected archives and in the generic consolidation and interlinking of knowledge – as is already achieved in some areas by artificial intelligence programs. This does not replace human thinking but puts it to the test – a new field of dialogue has opened that requires special scientific vigilance, creativity, and responsibility.

## Tech Hype and Meta-Levels

Hardly a day goes by without us being presented with visions of the future from so-called tech billionaires who would have us believe in a wonderful IT world created by artificial intelligence in which everything is taken care of for us, especially critical thinking and political action. Here, too, intellectual Europe urges us to take a critical distance. Citizens are to become consumers whose collective passivity increases the power, influence, and control of a select few. These techno-dystopias, which are presented as desirable social utopias, are perfectly compatible with the authoritarianism described above. In AI-generated universes of essentially unlimited virtual availability, the question of self-reflective thinking arises only to a limited extent. Contrary to the current tech euphoria – economically there is talk of hype, even a bubble that will burst and render billions of

investments obsolete – creative, self-reflective thinking will not only not disappear but will become more important than ever.

The rapidly expanding world of machines is challenging the human world and will place thinking and science on an even broader footing. Only through systemic, high-quality networking of our knowledge will it be possible to adequately explain the world of the future. Contrary to tech dystopias, humans will never give up on explaining the world, and the degree of complexity of our knowledge requires a “holistic” perspective like never before. The call for a “holistic” return to scientific analysis and scientific thinking has been around for about half a century. But never has the probability been so high that this revision of the goals of knowledge in the sciences will happen, at least in part. This is due less to an ethical or philosophical imperative than to the complexity of the knowledge systems generated, which can no longer be comprehended and thus understood from a sub-disciplinary perspective. Just as the “epistemic communities” of the international scientific community have systematically interconnected digitally for around thirty years, the knowledge generated is also increasingly interconnecting at newly created meta-levels.

These meta-levels fulfill two important functions. Firstly, they serve to organize and systematically and sometimes causally interlink knowledge that goes far beyond the conventional encyclopedic; and, secondly, they serve to interpret this knowledge from a holistic perspective. By “holistic” we mean here that modern science needs new orientation systems by which the consequences and causes of a scientific finding can be described in overall social, ecological, economic, and political and historical contexts. This is where formerly nonscientific levels of explanation come into play, because in this holistic perspective science is understood not as an end but as a tool for modeling the world and shaping it according to universally definable human needs. The lowest common denominator, the minimal consensus on which the understanding of a human-adequate world is based, is the creation of socially and ecologically compatible living spaces that are not designed and managed at the expense of future generations.

Due to the relativization and negation of fact-based knowledge as a strategy for enforcing political and economic interests, this minimal consensus seems to be repeatedly called into question today. It now seems to be accepted to deny anything and everything. Anyone who advocates for climate protection, gender equality, human rights, peace, or economic redistribution is quickly denigrated by the extreme right as woke and the radical left. Transnational rule-based values and institutions are losing

strength and validity in the public perception – from UN institutions to the International Criminal Court.

Egoism and rivalry, competition and profit maximization, the dismantling of social standards, attacks on free media, and the delegitimization of legal and social institutions can also be observed to a worrying extent in Western democracies. This is very regrettable but as part of political strategies it is also not surprising. In many cases it is no longer about wanting a better world but about achieving a better life for oneself and, in the best case, for one's own family – also at the expense of others, especially the socially disadvantaged. It is often said that those who still want to work for a better world lack the decisive narrative, the grand narrative, that is, the one that brings the “old values” – including those of development policy – back to the fore. It is strange that this narrative is not recognized in the Sustainable Development Goals (SDGs), as they describe the minimum consensus of the international community on how a humane global future should be organized to enable peaceful long-term coexistence on this planet.

On one hand, the SDGs describe “desirable developments”; on the other hand, these are operationalized in a concrete way to quantitatively record the respective implementation steps and measure their successes or failures. The SDGs are both a meta-level discourse and a practical manual; they are a powerful compendium that outlines how a future on our planet that is adequate for humans can be imagined. Seen in this light, they are also a powerful narrative, even though the realities – from the half-hearted fight against climate change to the new wars, the resurgence of extreme poverty, the loss of biodiversity, etc. – make their implementation seem somewhat utopian.

SDG 4 is of paramount importance for education and knowledge acquisition as it establishes a strong normative aspect. Education not only has functional aspects such as improving opportunities in life, but should also empower people to implement and advance sustainable, i.e., human-centered development. Education should no longer serve social distinction but rather community building; it should enable conscious living in harmony with natural conditions. In this definition, education is no longer value neutral but aims – apart from functional aspects of knowledge – to solve concrete and urgent problems that humanity faces. In this light, higher education is much more than a ticket to better opportunities in life; it is the acquisition of knowledge that should enable and accompany a sustainable future under humane conditions. All programs and projects that the sector of “Science and Research for Development Cooperation” at the OeAD manages follow this understanding of education and

knowledge and the objectives of the SDGs.<sup>3</sup> They describe, so to speak, the connecting thematic framework of all these activities.

## From “Development” to “International Partnership”

The production of knowledge has always been linked to the idea of “development.” But today, in view of the manifold “global challenges” and the “limits to growth” that are discussed in broad discourse, “development” appears in a completely different light from what it did a few decades ago. The term “development” has largely decoupled itself from the paradigms of progress and growth of the industrial age and, over the last two decades, has been discussed in terms of researching and testing human-centered systems, global poverty reduction, sustainable use of resources, energy transition (i.e., the substitution of fossil fuels with renewable energies), global migration, urban growth (megacities), and conflict prevention. Moreover, “development” has become an obligation of OECD countries toward the world’s poorest countries – the “developing countries.”

These terms – as well as the term “development research” – have remained in use to this day, even though we are once again in a veritable paradigm shift. The world has changed, and with it the perception of rich/poor or North/South. China has become the second-largest economic power, and India has not only conquered hunger but is also pursuing an extremely ambitious space program. The BRICS countries are playing a much greater geopolitical role than ever before, and with Russia’s war of aggression against Ukraine and the US’s tendency to withdraw from Europe the security situation has changed completely. What “development” means today is decided on a case-by-case basis or negotiated. Moreover, “development” contains a clear subsidy element, which is questioned especially by right-wing politicians and countries. Why should tax money be used to alleviate hardship or carry out eco-projects somewhere else when there is enough need for financing and political promises in their own countries, and capitalism – due to generally declining growth rates – seems to have reached its limits?

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3 This sector within Austria’s Agency for Education and Internationalisation, which is headed by the author of this article, essentially comprises three programs: the Austrian Partnership Programme in Higher Education and Research for Development (APPEAR, [www.appear.at](http://www.appear.at)), the Austrian-African Research Network ([www.Africa-Uninet.at](http://www.Africa-Uninet.at)), and Cooperation Development Research (KoEF, <https://oead.at/en/cooperations/international-he-cooperations/cooperation-development-research>).

All governments in which the extreme right is represented are therefore making massive cuts in development spending – the dismantling of USAID by the Trump administration, mentioned at the beginning, is only the tip of the iceberg. Development cooperation programs are reduced or eliminated altogether, unfortunately also in the areas of education and science. As the European Global Gateway initiative suggests, public-private partnership programs are preferred, as they can be seen as investments by donor countries and therefore also have added economic value. At the Sustainable Development in Higher Education Group conference in Vienna last November, these changes that are worrying for the participants were also central topics of discussion. What is at stake is nothing less than a fundamental reorientation of development policy efforts and perhaps also new content to rethink and redefine what used to be called “development.” The author of these lines’ closing remarks at the S-DHG group event mentioned at the beginning took this circumstance into account with a little humor. First: We should be on the optimistic side. Second: We build on each other. Third: We no longer call the thing development; we call it international partnership.

## Wars, Violence, and Destabilization

It is difficult to remain optimistic in times like these. The Global Peace Index published in mid-June 2025 by the London-based think tank Institute for Economics & Peace shows that violent conflicts are waged in 92 countries, more than at any time since World War II.<sup>4</sup> Austria ranks fourth on the peace scale out of a total of 163 countries. In 79 countries the situation deteriorated in 2024, more than in any other year since the index was introduced in 2008. A direct consequence of this is that 108 countries have increased their military spending. The APPEAR partner countries are also directly affected by the deterioration in the global security situation and, in some cases, by violent conflicts. As a stable country that ranks fourth among the world’s most peaceful countries, Austria has a special responsibility to view development policy and development research as a peace project and to further develop it.

Only through dialogue and an intersubjectively shared understanding of the world is it possible to achieve mutual understanding and emphatic comprehension of other ways of life – a prerequisite for peaceful coexistence and for a conflict resolution model that strictly rejects violence

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4 [www.economicsandpeace.org/global-peace-index](http://www.economicsandpeace.org/global-peace-index)

as a solution to conflicts of interest. Cooperation in higher education *sui generis* promotes a common, peaceful understanding of the world, as well as problem solving and conflict resolution, especially in places where violence has increased. In an increasingly militarized and war-torn global context, the peace-building function of science that pursues development policy goals must be emphasized. The last two years have been like a geopolitical roller coaster ride and can only be summarized here in brief, also regarding the APPEAR context. They were characterized by unstable geopolitical, geo-economic, and national developments, which had lost none of their drama and danger by the time this book went to press in January 2026.

Violent conflicts always exacerbate poverty. Global achievements in reducing absolute poverty have already been partially undone by the COVID-19 pandemic, and military conflicts have exacerbated this trend so far. Russia's war of conquest in Ukraine, which has now been going on for more than three years, and the Gaza war, which raged until October 2025 – causing unimaginable suffering for the Palestinian civilian population – are the most visible signs of radicalized governmental violence. According to the latest reports, at least 100,000 Palestinians are believed to have died following the horrific terrorist attack by Hamas in Israel on October 7, 2023. The Middle East is affected by violence, death, and destruction. The APPEAR project with the Islamic University in Gaza had to be discontinued after the second week of war, when the university was destroyed. In Lebanon, which has been politically and economically destabilized for years, the war between Hezbollah and Israel plunged the country into a deep crisis. According to the Lebanese Ministry of Health, around 4,000 people died in October and November 2024 after the outbreak of violent clashes, which also represented a confrontation between Israel and Iran. The ceasefire brokered by the US and France is extremely fragile. According to the UNHCR, 1.3 million people fled their homes.

Russia's war of aggression against Ukraine, which is still ongoing at the editorial deadline of this book despite peace efforts from various sides, has destabilized the geopolitical order, trust in multilateral organizations, rule-based conflict resolution, and the negotiating power of the US. The war in Ukraine is fought on both sides with an extremely high death toll. Due to the often barely marginal territorial gains – often only a few kilometers – commentators have also referred to it as a war of position, just like in World War I. With the Ukrainian offensives failing to achieve success, Western involvement has been increasingly questioned, especially by the Trump administration – a political reaction that has been reinforced by the rise of right-wing movements on both sides of the Atlantic. The

war in Ukraine is causing massive uncertainty in the post-Soviet APPEAR countries of Moldova and Armenia, which could play a central strategic part in any further attempt of the Russian Federation to “reconquer” post-Soviet territories. Georgia, meanwhile, has itself made a domestic policy shift toward Russia. The consequences of Russia’s war of aggression against Ukraine, such as high inflation, rising energy and food prices, and regional destabilization, can be felt in almost all countries and are hampering scientific cooperation. In this violent geopolitical scenario, APPEAR increasingly sees itself as a peace project – more than ever before, scientific cooperation is of particular importance for sustainable and peaceful development.

The shock of displacement following the seizure of Nagorno-Karabakh has been evident in Armenian society and politics over the past two years. In a lightning operation of the Azerbaijani armed forces, the government of the self-proclaimed Republic of Artsakh in Nagorno-Karabakh was forced to surrender on September 19, 2023. This resulted in the flight and expulsion, denied by Azerbaijan, of more than 100,000 Armenians. Azerbaijan’s recapture of the South Caucasus region of Nagorno-Karabakh has, on one hand, led to a wave of internal refugees that is difficult for the poor country of Armenia to cope with and, on the other hand, fundamentally called into question Russia’s role as Armenia’s “protective power.” Russia has strategically moved closer to Azerbaijan due to the war in Ukraine. The APPEAR Armenia projects are not directly affected by these developments although uncertainty and mistrust toward the aggressive neighbor are shaping the political mood. The situation is causing fear and consternation in the post-Soviet countries. In Georgia there have been mass protests against the pro-Russian government, in Moldova people fear that they would be powerless to resist a possible Russian aggression, and, since the Armenian exodus from Nagorno-Karabakh and Russia’s rapprochement with Azerbaijan, Armenia finds itself relatively unprotected against powerful enemies. The Trump administration’s Putin-friendly negotiation policy will by no means contribute to stabilizing the situation in the Caucasus; on the contrary, the opposite is to be feared.

In the African APPEAR countries, too, there has been an increase in violence, armed conflicts, and political destabilization. In Burkina Faso, which ten years ago was still a democratic, peaceful model country, jihadists have conquered 30 to 50%, depending on the source, of the country’s territory in the north, with the military junta issuing itself a *carte blanche* for another five years of political leadership in May 2024 despite initial announcements to the contrary. The junta, led by Captain Ibrahim Traoré, came to power with the promise of improving the security situation but

has plunged the country deeper into chaos. Moreover, the junta government, together with Mali and Niger, prepared to leave the West African Economic Community (ECOWAS), which happened in January 2025. This decision is seen in all three countries as a breakaway from former colonial structures and economic dependencies on European centers, especially France, and ultimately strengthens Russia's influence in West Africa.

In Ethiopia, the situation in the Tigray region, where the war is believed to have claimed hundreds of thousands of lives, has calmed down somewhat. In Amhara, however, fighting continues. Nevertheless, Tigray is also far from lasting normalization. Last year Mekelle University had around 40% fewer academic staff and less than half of its students compared to before the outbreak of hostilities. At the APPEAR selection meeting in November 2024, an agroforestry project at that tertiary education institution was selected to support lecturers and students specifically in this traumatic situation. In Ethiopia, direct violent confrontations have become less frequent, but Prime Minister Abiy Ahmed is having a luxury palace built for himself while ever-larger sections of the population are dependent on direct food aid, which is detrimental to political stability in the country. In Mozambique, the controversial elections in October 2024, the results of which were confirmed by the Constitutional Council, led to mass protests, looting, and prisoner releases, resulting in numerous deaths. In Uganda, the situation was comparatively calm.

In any case, the geopolitical situation and regional conflicts have not eased in the last two years, which has also led to some delays in project activities. Science is a transnational endeavor. Programs such as APPEAR – this will also need to be emphasized more strongly in terms of cooperation with current and future project partners – promote cosmopolitanism, collaboration in teaching and research, and respectful cooperation. This already begins with the “small things.” Thinking, experimenting, observing, and recognizing together, sharing what has been learned and putting it into practice are done so that people's living conditions improve. In this respect, development research and “research cooperation on an equal footing” are always also peace projects that promote cultural and sociopolitical understanding and focus on appreciative cooperation rather than competition and self-interest. Development research as a peace project is incompatible with ethnocentrism, nationalism, and neo-imperial politics.

## The End of Pax Americana as the Beginning of a New European Self-Confidence?

Ethnocentrism, nationalism, and neo-imperial politics have experienced a global renaissance since the election of US President Donald Trump on November 5, 2024. It seems that the US president's erratic policy benefits diverse forms of governmental egoism in many parts of the world, from rearmament and Europeans' fear of losing US protection to the disavowal of global climate policy and the undermining of multilateral organizations such as the United Nations and the International Criminal Court. One of Trump's key campaign promises was to end the war in Ukraine within a day. Early fears that he might represent the Russian president's interests rather than those of the attacked country have since proven true in many cases. Other geopolitical and economic announcements and strategies, e.g. in trade and customs policy or the partial departure from the transatlantic alliance, continue to cause global irritation.

Since the beginning of the Trump II administration, the APPEAR team has been following the geopolitical situation with growing concern and has also maintained a close exchange of information with project partners in the respective crisis areas. In July 2025, the American aid organization USAID was dissolved. Although a drastic reduction in development cooperation funds had been expected, the radical nature of this measure shocked many organizations and people worldwide: an annual budget of around US\$ 60 billion, primarily for health and nutrition in poor countries, was cancelled without replacement. The radical transformation of US foreign, trade, and development policy is also changing the architecture of global development cooperation. It seems that development cooperation is no longer seen by the US administration as a foreign policy instrument, as "soft power." The radical dissolution of USAID, the world's largest donor organization, has not only caused a wave of outrage but also meant massive cuts in aid to many countries. Countries where APPEAR is active are also affected, such as Ethiopia and Armenia.

To contextualize this decision, we must briefly address a fundamental geopolitical change. The new US isolationism is becoming all the more apparent in its response to Russian aggression, the US tends to withdraw from Europe and from global political responsibility, and Pax Americana is counteracted by territorial ambitions – Greenland, Canada, Panama Canal – and the US's hegemonic position, since the end of the Cold War is increasingly replaced by the imperial claim to establish a robust empire (and, in the best case, expand it). The unipolar world order will be replaced by a multipolar one – the US will face the blocs of China, Russia, India,

and possibly Europe. US isolationism does not shy away from questioning the transatlantic alliance. This is a clear sign of an abandonment of global responsibility. Thus, the “West” – also as the protective power of “liberal democracies” – is not in a good position, and international organizations are also experiencing further institutional and practical weakening against this backdrop.

New and extreme right-wing policies see development cooperation as an enemy. After all, they want to score with the popular slogan, “Our money for our people.” Not only in the US but also in other right-wing populist governments, including the previous government in the Netherlands, budgets have been dramatically reduced. On a positive note, the three-party coalition government in Austria has adopted a long-delayed, now slightly modified three-year program for Austrian development cooperation, which also emphasizes the important role of science and research for development cooperation. Due to the bleak budget situation in the Republic, there will also be cuts in the Republic’s bilateral and multilateral official development assistance, rumored to be between 25% and 30%, which roughly corresponds to the increase in the last few years.

In the context of geopolitical changes and conflicts, national and European development cooperation with countries of the Global South will in any case gain importance as “soft power.” Here, too, Europe must begin to position itself more clearly and score by taking a stand against other power blocks. In the last few months before this book went to press in January 2026, European countries – with a few exceptions – began to move closer together regarding Ukraine diplomacy and to speak with one voice while remaining careful not to completely lose the already fragile support of the US. The only chance for Europe to deal constructively with US isolationism and Russian aggression would be to achieve strategic autonomy, allowing Europe to go its own way in the game of powers. To this end, EU reforms such as the abolition of the principle of unanimity are just as urgently needed as increased investment in European self-defense, but also a committed and self-confident European foreign and security policy based on humanitarian aid and effective development cooperation. Europe must find new geopolitical self-confidence if it does not want to be left behind when it comes to shaping the global future. Against this backdrop, the stabilizing and peacekeeping function of cooperative partnership projects with scientific institutions in the priority countries of Austrian development cooperation and European development cooperation strategies cannot be emphasized enough.

## APPEAR from a Different Angle

APPEAR started in the year 2009. A whole series of interesting, unconventional, and inspiring research collaborations have been carried out in the past 17 years of APPEAR, hundreds of people have been and still are involved in the project activities, and many thousands of people have benefited and will benefit from the research collaborations and their results. The contributions in this book are all based on APPEAR projects that have already been completed or are still ongoing, or on the experiences of APPEAR scholarship holders. However, these contributions do not describe the projects in a conventional way but rather present contexts and reflections that arise from the multilayered project work.

Information about the projects themselves is spread by the APPEAR team as part of broad-based day-to-day public relations work. In addition to the presentation of project activities on the websites, the media, our public events, and our own radio platform,<sup>5</sup> two project documentations have been published in the form of books: *APPEAR I: Participative Knowledge Production through Transnational and Transcultural Academic Cooperation*, and *APPEAR II: New Pathways towards Participative Knowledge Production through Transnational and Transcultural Academic Cooperation*.<sup>6</sup>

Apart from these project documentations, this book aims to reflect on APPEAR from a different perspective. The book describes and reflects in a free and formally diverse manner on collaborations and social contexts in the field of development research – be it through theoretical, biographical, research-technical, or philosophical considerations, or through personal encounters, impressions, feelings, reservations, etc., APPEAR has amassed a rich treasure trove of academic work, results, and personal experiences, and this publication aims to reflect on this treasure trove in a way that is not usually found in project documentation. Particularly in research concerning human coexistence, it is important to read between the lines emphatically and to engage in self-reflection on one's own role and intentions. This publication wants to give a voice to encounters, reflections, criticism, and everyday perception in research practice. The book does

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5 Austrian Broadcasting Cooperation – ORF Ö1-Campus. *Welt im Ohr Podcasts*. <https://oead.at/de/expertise/entwicklungsforschung/welt-im-ohr-radio-und-podcast>

6 APPEAR I is published by Böhlau Verlag, APPEAR II by StudienVerlag, Innsbruck; both books are also available open access via the APPEAR website. After the end of the current program phase these two volumes will be supplemented by a third project documentation.

not contain academic papers or project descriptions but lasting impressions and narratives about APPEAR and the people who have brought the program and projects to life in many countries and regions.

Violet Kisakye and Deous Mary Ekyaligonza from the Mountains of the Moon University in Uganda start the contributions by APPEAR university cooperation program participants with an important question: “Could Solutions Lie within and without?” At the beginning of their article, the authors state that in the context of knowledge exchange and mutual learning we tend to look outward rather than inward. This is because there is a false belief that solutions can only lie elsewhere rather than within us. The advancement of globalization at the expense of localized solutions, especially in higher education, could be partly to blame. Indeed, the benefits of globalization in higher education are well documented, including increased exposure of students to different contexts and cultural experiences and easy access to technologies and innovations. This increases students’ competitiveness in global markets. Critics of the globalization of higher education point out several challenges, including the erosion of local academic and cultural identity and the risk of sidelining indigenous knowledge in favor of “modern” Western education models. For agricultural education, the challenges may be more pronounced given the context specificity that may require localized solutions. The paper explores the delicate balance between globalization of higher education, specifically in agricultural education, and the advancement of localized solutions. The conclusions are based on the authors’ experience in implementing an APPEAR project in Uganda, which showcased a balanced blend of both globalization and localization of agricultural education through joint curriculum development, teaching, learning, and agricultural research.

For Tigran Keryan, a former scholarship holder, the APPEAR programme was not just an academic opportunity: it was a catalyst that reshaped who he is and how he sees his role in the world. It gave him the courage to step beyond disciplinary borders, the skills to connect science with society, and the confidence to make his voice heard in spaces where change happens. His deeply moving and personal article “From Vision to Action: My Transformative Journey with APPEAR” allows readers to share in the insights that accompanied him during this transformation and are now an integral part of his personality. Through rich exchanges, collaborative projects, and immersive cultural experiences, he discovered the power of research as a bridge between knowledge and action. Today, looking back, he sees how his initial dreams and visions have evolved. He stands not only as a researcher and teacher, but also as a learner, listener, friend, colleague, and a changemaker. In his chapter, he reflects on his

path from the very beginning to where he is today, exploring the challenges he faced, how he overcame them, the ones that remain, and his visions for the future.

The contribution “Retracing Lines of Difference in Understanding Disability Research: Critical Reflections on Challenges and Opportunities in North–South Research Collaborations,” retraces recurring questions of anticipated common or diverging understandings of disability and disability research in a so-called North–South academic collaboration between universities in Austria and Ethiopia. Simon Reisenbauer, Margarita Bilgeri, Michelle Proyer, Elvira Seitinger, and Yirgashewa Bekele jointly analyze their common experiences of working together. They develop different models for making sense of what kind of common understanding of doing research on disability can, and must, be achieved. These are referred to as “spheres” to hint towards possible overlays. Two of these, Disability Models & Approaches and Epistemology & Knowledge, will be introduced and discussed against the background of the broader discourse on thought patterns in the context of joint international collaborative research efforts.

The article, “Renewable Energies as a Key Point for Improving Quality of Life,” by Christof Sumereder contributes experiences from the field of teaching and project activities and reports on mutual, respectful interaction. Energy in a wide variety of forms is needed by everyone every day. Unfortunately, energy is not available to everyone in sufficient quantity or quality, or at an affordable price. It is therefore not without reason that access to energy is anchored as an SDG. The University of Applied Sciences Joanneum is open to incoming students from affected regions all over the world and offers various fields of study for training and is also available as an ambitious project partner.

Hafta Tesfay, a researcher originally from Ethiopia and since many years affiliated with the University of Life Sciences in Vienna, raises a crucial question in his contribution: “Can Research Collaborations Help Mitigate the Brain Drain of Professionals and Catalyze/Stimulate Peace? Examples from Africa.” This article specifically explores how North–South and North–South–South research collaborations and partnerships help mitigate the brain drain of professionals and catalyze peace. Moreover, it highlights how these forms of cooperation transform brain drain into brain circulation, fostering capacity building, institutional strengthening, and sustainable knowledge exchange. Collaborative research initiatives and programs can create platforms for knowledge sharing, professional development, and joint innovation, allowing professionals to remain engaged with their home institutions while benefiting from international exposure. Such partnerships not only strengthen local research capacity

but also promote cross-cultural understanding and cooperation, which are key ingredients for peacebuilding. These collaborations promote peace and stability by creating cross-border academic communities that transcend political and ethnic divisions, encouraging dialogue, trust, and a shared sense of purpose. The article concludes that well-structured and equitable research collaborations are not only critical tools for retaining and attracting African talent but also serve as catalysts for peacebuilding and sustainable development across the continent.

Claudia Dolezal, Helsio Azevedo, Daniel Zacarias, and Sonia Cossa contribute the chapter “Building Capacity for Sustainable Rural Tourism in Mozambique through a North-South Collaboration: Lessons from the CAST Mozambique Project.” This chapter constitutes a reflective account of the experiences gained while working on the project of those who founded it and those who joined along the way. The CAST Mozambique project is aimed at building capacity in Mozambique’s higher education regarding sustainable tourism practices, creating the first master’s degree in sustainable tourism in the country, and involving rural communities more strongly in the curriculum. It set out as a collaborative effort between two universities in very different geographical and cultural contexts: Mozambique and Austria. Through some honest and reflective insights into everyday life of working on an international project, the chapter sheds light on moments of team and personal success as well as challenges in navigating this North–South collaboration. While sharing an overall optimistic and motivating tone on the relevance and importance of development projects and the benefits they bring, it also critically reflects on drawbacks and shortcomings, ultimately shedding light on some important lessons learned and pathways of growth that project members experienced.

Ruth Kutalek, Esther Mukooza, Aloysious Nnyombi, Constantine Loum, and David Kaawa-Mafigiri reflect in their essay, “Challenges Revisited: Reflecting on Needs-Based Education and Research Programs,” on an APPEAR project that established a master of arts program in medical anthropology and international health at Gulu University in Uganda. The aim of this project was to create a new generation of scholars and practitioners who are deeply rooted in their communities and able to carry out meaningful, participatory work. The article reflects on the project and considers how it led to larger initiatives aimed at strengthening research capacities and cooperation in the social sciences of medicine in Uganda. These initiatives were put into practice through graduate and postgraduate education as well as EU-funded scientific projects. The impact of this cooperation on the development of the scientific field and

on the communities in which medical anthropologists have worked is also discussed.

The paper, “The Best of Many Worlds? Blended Learning in Transnational Settings,” by Josef Strobl and Ainura Nazarkulova explores the evolving landscape of blended learning. Empirical data, primarily from educators and to a lesser extent students, has been gathered through an ongoing survey to assess perceptions and experiences. Blended learning, which integrates face-to-face instruction with online components, offers a flexible and personalized educational environment. It bridges synchronous and asynchronous modalities, combining real-time interaction with self-paced study, and spans physical and virtual spaces to enhance accessibility and engagement. The paper also reflects on the implementation of blended learning in international collaborations, particularly with partners in Armenia and Kyrgyzstan. These cross-cultural engagements reveal critical strengths, weaknesses, opportunities, and threats.

The contribution “Growing Stories and Relationships: The AMUTI Journey” initiated by Milena Klimek, Stefanie Lemke, Clement A. Okia, and Lorenz Probst and written by “The AMUTI Writing Collective” uses a process-relational perspective. The authors cultivate a “tree of stories” that follows the progression of the AMUTI project and depicts the richness of the relationships created along the way. From the initial spark, through the layered integration of students and community members, the personal narratives illustrate the deep roots that are necessary for sustainable educational and institutional impacts. They describe the shared relationship between the institutions as well as inclusive connections with students and refugee and host communities. Highlighting aspects of trans-disciplinarity, co-creation, transformative gender perspectives, and qualitative methods, the story of AMUTI is told, shedding light on the importance of personal relations. It also raises questions such as should donors consider different scales for project success? Are personal relations a key factor in driving lasting change? And can relationships create a foundation for larger change? By focusing on the strengths of relational processes, this chapter urges readers to rethink the role of human relations in fostering sustainable development and institutional growth.

The contributions presented in this book are a well-chosen selection from the wealth of experience gained in recent years through the APPEAR projects. They are intended to inspire and stimulate further discussion and reflection within the scientific community and beyond. They also highlight the immensely important social aspect of development research and the effort to contribute to a sustainable and, above all, peaceful future. In this spirit, the editor would like to thank the Austrian Development

Agency (ADA) for funding the APPEAR program as part of International Partnerships Austria, and Austria's Agency for Education and Internationalization (OeAD) for its outstanding institutional support in implementing the program, and above all the many people who have made this program something very special through self-reflective and responsible research and teaching.

II Contributions by APPEAR  
University Cooperation  
Program Participants



# Metareflections beyond the Daily Research Routine: Could Solutions Lie Within and Without?

## Introduction

Universities globally are striving to provide the best quality education and research that seeks to address global and local challenges centered around improved health, agricultural production, and engineering solutions to complex problems. Academic institutions have increasingly become pivotal to societal transformation owing to their core objective of providing relevant workforce and innovations to propel the communities forward (Luvalo, 2014). Indeed, higher education is credited for contributing towards creating professionals with technical and managerial skills relevant for both individual and community transformation. Consequently, higher education has been linked to increased incomes, positive mindset and behavioral change, and overall modernization of individuals and societies, among others (Pee & Vululleh, 2020). Therefore, the role of universities goes beyond providing quality education and research and extends to public service and community engagement. Notably, this is a major shift from the ivory tower concept where universities had little interaction with the communities. Consequently the shift has been from the ivory tower mentality to engaged academic institutions, making societal transformation and community engagement a core objective of most universities across the globe (Chantler, 2016).

Due to changing economic markets and pressures attributable to globalization, higher education has inevitably been going through restructuring so as to remain relevant to the changing needs of global markets and society in general (Luvalo, 2014). The focus is not only on mere knowledge accumulation but the acquired competences and skills relevant for problem solving. This has led to the global emergence of competence-based education, which is an outcome-based model that focuses on design and modification of teaching processes for improved demonstration of student skills, abilities, and knowledge. Therefore, competence-based educa-

tion (CBE) is regarded as a pedagogical approach that emphasizes knowledge and skills application to solve real world problems (Catacutan et al., 2023). This is a sharp departure from the traditional standardized education processes based on rigid schedules (Nodine, 2016). The key objective of CBE is to prepare learners to thrive and excel in this interconnected and dynamic society. Although CBE has been implemented in the United States and Europe since the 1970s (Mulder, 2010; Nodine, 2016), it is just gaining traction in Africa in recent years. In fact, several African Countries (e.g., Ghana, Kenya, Rwanda, South Africa, Tanzania, Uganda, and Zambia among others) are in different phases of restructuring of their curricula to embrace CBE in a bid to address the prevailing challenges (Kasuga & Kalolo, 2025; Wawire et al., 2025).

However, there are fears that ongoing education restructuring and adoption of CBE, especially for academic institutions in Africa, is driven by globalization and is mostly a response to global market demands which may create a mismatch for local needs, especially in rural-based agricultural economies. Critics of CBE argue that globalization and over standardization of higher education can erode local, cultural, and contextual relevance of higher education, which undermines its contribution to community transformation. This is especially true for the agriculture sector, owing to its context-specific nature. The agriculture sector is shaped by local, environmental, economic, social, and cultural realities that may differ from region to region. Therefore, higher education in agricultural studies ought to recognize these complex local realities while also maintaining the competitiveness of the graduates to the global labor market. This calls for a delicate balance between globalization and localization of higher education to cater to these complex local and global challenges.

In this chapter, we explore the delicate balance between globalization of higher education, specifically in agricultural education with advancement of localized solutions. This is from our experience in implementing the APPEAR funded Agroecology Rwenzori (AER) project, which showcased a balanced blend of both globalization and localization of agricultural education through joint curriculum development and implementation of a competence-based curriculum for a master's program in agroecology. We aim to showcase how agricultural education processes can be contextualized and globalized to address complex agricultural challenges. We start by highlighting the concept of globalization in higher education and present its relevance in agricultural education. We then discuss the contextual nature of agriculture in Africa and the relevance of local realities in designing and implementing programs for higher education for agricultural studies. We present the AER project as a case study that blends

both global and local realities in designing and implementing a master's in agroecology program at Mountains of the Moon University, Uganda. We also explore how "glocalization" (a complex blend of localization and globalization) can look in practice through our lived experiences with the AER project. We end the chapter with lessons for the future of agricultural education in Africa and final reflections.

## Globalization of Higher Education

### Definition of Concepts

Knowledge flow is not bound by geographical boundaries and thus universities have often been open to a global flow of people, knowledge, information, technologies, innovations, and products (Marginson & Wende, 2007). The universities are not confined to the local market dynamics where they may be geographically located but are rather expected to contribute to the global labor force through provision of highly skilled, motivated, and globally competitive graduates. To remain relevant on a global scale, universities have embraced globalization, which focuses on skill-based learning that targets the marketplace, making them industry focused (Yang, 2003). Therefore, to meet international demand, the concept of globalization has increasingly become important as one way of standardizing education to allow for easier academic mobility, knowledge, and technology-flow and a more efficient integration in the global market economy.

Globalization is linked with economic openness, increased role of market forces, and economic integration with the world economy (Siddiqui, 2014). It is defined differently by various scholars. Meyer (2011) defines globalization of higher education as "the widening, deepening and speeding up of interconnectedness of universities within the global world." The implication is that universities all contribute to the same labor market pool and are thus not just confined to their local towns where they are located. They are thus a part of the global network contributing to the wider societal transformation. Other scholars, however, equate globalization of higher education to Westernization, which is an infusion of Western culture, technology, and political ideology in higher education (Sekiwu, 2010; Yang, 2003). This is because globalization is strongly associated with neoliberalism, which originated from the Western world. Therefore, the equation of globalization with Westernization is not far-fetched (Siddiqui, 2014). In fact, Anglo-American economic and cultural

content has dominated in higher education as in many sectors (Marginson & Wende, 2007). Other scholars equate globalization to internationalization and use the terms interchangeably (Tight, n.d.). Others distinguish the terms through narrowing the scope of internationalization. According to Teichler (2004), internationalization manifests in increased cross-border activities with less interference in national systems of higher education, while globalization tends to blur national borders with its effects transcending states. Teichler (2004) further defines internationalization as the collective changes or actions of higher education that facilitate increased cross-border activities such as academic mobility, cross-border collaborations and overall cooperation between academics from different geographical scopes.

For purposes of this chapter, we define internationalization as a subset of globalization. In our case, globalization encompasses all processes that support international cooperation in teaching, learning, and research. It generally includes activities such as alignment of academic systems with global credit transfer systems to facilitate academic mobility, internationalization of curriculum to reflect global perspectives and case studies, joint research projects and joint publications across borders, engagement of students and staff in international mobility, and increased partnership of academic institutions with global industries and bodies. This is facilitated by technology that allows for virtual joint activities and open distance electronic learning which basically opens the classroom beyond the concrete walls. With the blurring of borders, universities thus market to a broader global audience and heavily invest in international branding. Ultimately, the university global rankings are a powerful marketing tool due to their international reach. Therefore, we view globalization as overall homogenization of teaching and learning and an increasing influence of market-driven forces in higher education.

## Globalization in Agricultural Education

Food systems globally are faced with shared challenges that include climate change, food insecurity, changing diets, unpredictable global markets, increased population and hence increased demand for food, over-reliance on agro-inputs that strain the environment, increased food access inequalities, and governance challenges (FAO et al., 2025). These challenges directly derail the attainment of SDG 2, which aims at ending hunger through improved access to nutritious food. Beyond SDG 2, agriculture stands at the nexus of other global challenges including accen-

tuation of gender inequalities, climate change, poverty, and environmental degradation, which makes it vital for the attainment of other SDGs. These include SDG 1 (No Poverty), SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action), and SDG 15 (Life on Land) (Kumar & Balyan, 2025). Understanding and developing solutions for these challenges calls for sharing knowledge, data, research outputs, technical expertise, and technology and combining resources.

This can be through encouraging international collaboration and opening the academic space beyond the confines of state boundaries to allow for joint curriculum development and review, co-teaching, and joint research, which allows institutions to leverage each other's strength and overcome individual challenges. For agricultural education, sustainability of food systems is very important, owing to their interconnectedness with other social, economic, and environmental dimensions. Therefore, globalization allows academic institutions to tackle the challenges in a systemic manner with careful consideration of trade-offs and externalities. Most notably, agricultural technology transfer and exchange propelled the advancement and adoption of vital technology such as precision farming technologies, water smart systems, biotechnology, and more recently the use of generative artificial intelligence to solve notable challenges like pest and disease monitoring and management, climate-related risks and soil and water degradation, among several others. Ultimately, instead of reinventing the wheel, globalization facilitates quicker and more efficient access to technological innovations in the most remote areas that may be deprived of vital resources.

Despite the noted benefits of globalization for higher education in general and agricultural education in particular, several criticisms have emerged over the years. Some scholars note that globalization promotes uniformity of cultures and language with a clear domination of the Euro-American cultures over everything different from the "norm" (Marginson, 2021). In fact, recognized social science concepts and theories mostly reflect Euro-American (and mostly US) ideology. Also, Web of Science and Scopus create most scientific bibliometrics and have a clear influence on what constitutes valuable scientific information that could eventually influence industry and policy. However, historically, most of the editors that determine what is eventually accepted in these journals are European or American with little representation of scholars from the developing world. Additionally, despite English being the first language for 5% of the global population, it has been "adopted" as the major "language of science" for most scientific literature with little attention for support-

ing translations (Marginson, 2021). Essentially, indigenous knowledge is excluded and often unrecognized in scientific discussions because it may not meet key criteria set by the internationally recognized scientific platforms which ultimately exclude most of human knowledge. Furthermore, industry-focused higher education is akin to holding education captive to the global market forces which may lead to a strong focus on disciplines that are deemed marketable and sidelining scientific knowledge that may not translate to marketable outcomes on a global scale. This makes higher education overly capitalistic at the expense of maintaining the supposed neutrality of science. Ultimately, globalization shifts the emphasis from local and regional educational needs to global needs (Vladeva, 2022).

## Agricultural Education in Africa: Contextual Realities

For agriculture in general, contextual realities cannot be ignored because it is often location based and dependent on seasonal changes, local ecologies, microclimates, and sociocultural influences. These local realities influence land use and land cover changes, soil fertility, water availability, household decision-making dynamics, and land tenure systems. The African farming system is highly diverse, dominated by smallholder farmers, and is shaped by an interplay of biophysical, historical, and sociocultural factors. The result is an African farming system that is diverse in space, and variable through time, production, and consumption patterns (Kuivanen et al., 2021) i.e. farm types, which can support the implementation of a more tailored approach to agricultural development. This article explored patterns of farming system diversity through the classification of 70 smallholder farm households in two districts (Savelugu-Nanton and Tolon-Kumbungu). This diversity also extends to farming systems within the same location/region and this heterogeneity at microscale strengthens the case for having localized solutions suitable for the prevailing realities even within the same country. Additionally, farmers' lived experiences are a core dimension that is often ignored in both teaching and research. Consequently, technology diffusion into farming communities trails behind the actual production of the technologies.

With the African economies majorly dependent on agriculture, African governments have increasingly appreciated the role of agriculture in the socioeconomic transformation of African societies in general. By extension, strengthening higher education capacity in the agri-food sector is one of the main pathways to transforming African rural communities. Despite the fact that most of the agricultural workforce may not

directly engage in agricultural higher education, they are most likely to receive training or be influenced by the products of higher education, e.g., through extension workers or vocational training, or be influenced through policies that are engineered by the graduates (World Bank, 2019). Historically, universities in sub-Saharan Africa were established by colonial states and modelled on the colonial education system. In postcolonial Africa, the establishment of universities was and is still influenced by government policy with a bid to create regional balance. This is particularly true for Uganda where public universities are regionally located and primarily meant to serve regions where they are located. This means that the universities' main objective is to transform their immediate communities. With the advancement of globalization, this setup is being disrupted and regional universities in rural Africa are increasingly opening and rebranding themselves to appeal to a broader market.

This presents a paradox in how the universities can remain relevant for the farming communities in their location but still provide valuable education in a globalized world. Consequently, the concept of “glocalization,” which is the contextualization of globalization concepts to maintain both local and global relevance of higher education, is gaining traction among academic circles. While challenges of globalization do exist, emphasis should be on customization, adaptability, and practical curricula as a valuable approach to agricultural education in a globalized world. This will counter the danger of producing globally competent but locally ineffective graduates. The problem is not globalization itself, but how it can be used. In the next section, we share our experience with how we were able to blend these two concepts in the development and implementation of a master's in agroecology at Mountains of the Moon University in Uganda. This was through two APPEAR-funded capacity strengthening projects called the Agroecology Rwenzori project, phases I and II.

## The AER Project: Glocalization in Practice

### The Rationale of the AER Project

The Rwenzori region, located in western Uganda, is riddled with rampant deforestation, land degradation, water pollution, declining soil fertility, and an increase in population. Conversely, the region is also home to unique montane ecosystems that host rich biodiversity and are home to several critical nature reserves and national parks as well as key water resources such as critical wetlands, crater lakes, and rivers. With agricul-

tural lands declining in soil fertility due to poor farming practices, the farming communities are gradually moving to marginal lands such as forests, wetlands, and nature reserves to produce food for the ever-growing population. Consequently, critical habitats are being destroyed, threatening biodiversity and sustainability of water resources. Amidst these challenges, is Mountains of the Moon University (MMU), a rural-based university in Fort Portal, which is the major city in the Rwenzori region. The university prides itself as a catalyst for transformative change among the rural farming communities of the Rwenzori region. Faced with these challenges, MMU partnered with the University of Natural Resources and Life Sciences (BOKU) in Vienna, Austria, to introduce and strengthen capacity for agroecology education and research for sustainable agriculture in the region. The FAO (2026) defines agroecology as:

*A holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems. It seeks to optimize the interactions between plants, animals, humans and the environment while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced.*

This is a farming approach that fits well with the fragile eco-sensitive nature of the Rwenzori region.

With funding from APPEAR, the AER was launched and implemented between 2016 to 2020, while a follow-up advanced academic partnership project (AER phase II) was implemented between 2022 to 2025. The overall objective of the two AER projects was to contribute to the establishment of interdisciplinary agroecological science and technology to achieve sustainable use of natural resources by developing viable farming communities in the Rwenzori Region over the next decade. Specifically, the projects aimed to 1) improve knowledge and skills in agro-ecological principles and systemic understanding of agricultural systems in higher education, research, and community outreach at MMU, and 2) empower communities enabling the adoption of sustainable agriculture production methods based on traditional knowledge, alternative agriculture, and local food system experiences among smallholder farmers and the elaboration of entrepreneurial and marketing skills along the food chain in the Rwenzori region. Key outputs included the establishment, implementation, and review of a master of science program in agroecology, establishment of institutional and community agroecology demonstration sites, and devel-

opment of an agroecology research agenda, among several others. In the next section, we discuss how the globalization and local aspects (glocalization) were integrated into different aspects of the project, starting from curriculum development, teaching and learning, agroecology research, farmer training, and stakeholder engagement.

## The AER Project: A Blend of Two Worlds

*Curriculum Development.* The development process of the master of science in agroecology curriculum started with a needs assessment that focused on framing local challenges in a global context. We benchmarked from similar international curricula in Europe and drew inspiration from international frameworks such as the Sustainable Development Goals and the FAO agriculture frameworks. This was done to increase the global appeal of the program beyond the national and regional scope. To maintain local appeal, a local needs assessment that targeted agroecology industry players in the region and the country was conducted. Their views on key capacity gaps that need to be addressed by the curriculum were reviewed and integrated into the curriculum. Therefore, the curriculum reflected global positioning whilst highlighting the local needs, including gender inclusion in agroecology. In addition, the curriculum development team was composed of a mix of experts from Europe (i.e., BOKU) and Uganda who brought on board international, regional, and local perspectives. During the curriculum review process, academic staff from both BOKU and MMU actively contributed to the proposed technical content of the agroecology program. However, the final review and quality control was done at MMU through the school of agriculture faculty board, the MMU quality assurance committee of the senate, and the National Council for Higher Education. This shows how both global and local players can cooperate and contribute to a program while still maintaining its local and global relevance.

Conceptually, the curriculum is interdisciplinary and blends different dimensions ranging from ecological, social, political, cultural, and economic aspects. Key global concepts embedded in the curriculum include climate change, governance, global food sovereignty and social inequalities, international agricultural policies and trade, entrepreneurship, and marketing. In the teaching modules, both global and local case studies relevant for the region and the country were integrated to showcase how these global phenomena manifest in the local context.

*Pedagogical Approach.* The program adopts a competence-based approach that emphasizes knowledge and skills application to real-world

problems. Competence-based education historically emerged from the US and Europe and is recently adopted by some African countries at a national level as a transformative educational approach. To overcome the challenges of over standardization and erosion of contextual realities (often attributed to CBE), we adopted the case study learning approach as one of the main teaching methodologies. This is a student-centered approach that presents students with real world problems and encourages them to be innovative and critically develop solutions (Herreid, 2007). We encouraged students to utilize day-to-day challenges they encountered within their communities (most students come from farming households) to be used as learning case studies. These were juxtaposed with global case studies from other regions and countries to provide a comparative discussion. Consequently, students were introduced to both local and global perspectives.

Additionally, the local context was further emphasized through field practical visits to smallholder farms using these farms as extended classrooms for co-learning with farmers. To further expose the students to global perspectives, joint learning visits with BOKU and MMU students and staff were periodically conducted. For instance, BOKU students visited MMU and had joint farm visits with MMU students while MMU staff visited BOKU and were exposed to Austrian organic and agroecology farms. This exposed students and lecturers to the different sociocultural contexts and how they influence the local agri-food systems.

*Pedagogical Tools.* We adopted a mixture of teaching and learning tools that included textbook modules, traditional whiteboards, visual aids such as videos and pictures, and use of university demonstration farms and smallholder farms as case studies, among others. Additionally, due to the emergence of COVID-19, online teaching and learning gained popularity in the Ugandan universities and particularly at MMU. During this time, MMU upgraded the Open Distance Electronic Learning (ODEL) system infrastructure and made it mandatory for teaching staff to have part of their learning sessions via the university ODeL system. Consequently, some of the textbook modules that were developed during the first phase of the project were transformed into audiovisual versions and uploaded both on the ODeL system and on the YouTube platform. This demonstrates a perfect case for how global events can influence changes in teaching processes and methodologies at a local level. Additionally, other virtual meeting platforms like Zoom were utilized to exchange knowledge and experiences between BOKU and MMU students and staff. For instance, the MMU staff were able to co-teach with BOKU lecturers to BOKU students via Zoom. This shows how technology and, more specifi-

cally, digital platforms can be effectively utilized to showcase local realities on a global scale.

*Agroecology Research.* To propel coordinated agroecology research at MMU, we developed the agroecology research agenda to be used by the students and staff interested in agroecology research. The development of the document was done in a participatory manner, integrating the views of the local stakeholders in Uganda who were active in the agroecology sector and the input from the BOKU research team. In fact, an expert from BOKU visited MMU for a week and trained staff in how research can be integrated into agroecology institutional demonstration farms. The MMU team also visited the BOKU experimental farm and learnt how BOKU has integrated research on the experimental farm for over 100 years.

This knowledge was consolidated and integrated into the agroecology research agenda. The local research needs were compared with the global agroecology needs (that were analyzed through a state-of-the-art desk review) to highlight points of convergence between the two perspectives. Therefore, we adopted a bottom-up approach of development of the agroecology agenda. Since agroecology is very place based and thus context specific, local research needs that did not converge with the global needs were still included in the document. Lastly, the research agenda aligned with several local and international frameworks. For example, the agenda was well aligned with the MMU research agenda, and Uganda's national development plan. Regionally, it aligns with the East African Community Vision 2050 and the African Union Agenda 2063. Globally, it aligns with the 2030 Sustainable Development Goals, the Convention on Biological Diversity (CBD, 1992), the United Nations Framework Convention on Climate Change (UNFCCC, 1992), the Basel Convention (1989), and the United Nations Convention to Combat Desertification (UNCCD, 1997). Overall, our approach was to prioritize local research needs and analyze how they fit within the national, regional, and global contexts. Besides the research agenda, agroecology scholars from MMU and BOKU collaborated and conducted applied research on using smallholder farms and co-supervised students at the PhD level. This resulted in over seven co-authored publications in highly reputable international journals with more in the pipeline. Furthermore, we transformed the research findings into policy briefs that purposely framed the outputs into local perspectives to influence policy.

## Lessons for the Future of Agricultural Education

Through our experience of implementing the AER project, we highlight the following lessons that could be useful.

To avoid losing contextual issues, we found it easier to start from the local perspective and then explore how local realities fit into national, regional, and global spheres. In most cases, local teaching and research need converged with the national, regional, and global agenda. If it's done in the reverse, there is a likelihood that the local needs may be overshadowed by the global agenda. This was particularly true during the needs assessment exercise for the curriculum content and the research agenda.

In educational reform, there is need for humility. We found that in our wider stakeholder consultations to inform the academic curriculum and the research agenda, everyone was a potential source of information regardless of their academic level. In our case, farmers who had never had formal education were a critical source of information just by sharing their day-to-day experiences on the farm as well as their observations of the changes over time. Our role in the process was mainly passive to allow for unbiased discussions and documentation of diverse views for local contextualization. What surprised us was that the community had a lot of resources that could be useful to the university for training students. These resources included smallholder farms that could be utilized for teaching and research, village training venues, and locally adapted innovations.

While the local perspectives are very important, we recognize that the world is interconnected and we are not training students for the local labor market only. The graduates must be locally relevant and globally competitive. Therefore, emphasis on both perspectives is very critical. To achieve this, the blend of both perspectives must be mainstreamed through all teaching and learning processes and research. It must be from curriculum development, implementation, and assessment. Therefore, it cannot be an afterthought. This calls for deliberate adoption of teaching and research methodologies that emphasize both global and local contexts and an investment in teaching infrastructure and technologies that makes it easy to interact with both the local and global community.

In terms of mobility, we found it easier to have mobility flows from Europe to Uganda. Although more financial resources are required to support a stay in Europe than in Africa, the major issue was the cumbersome visa processing requirements required of people from Africa and Uganda in particular. Therefore, physical mobility was mainly skewed to Uganda. We overcame this using digital platforms to have more student and staff interactions. Therefore, there is need to be adaptable and flexible.

## Final Reflection

To produce locally relevant and globally exposed graduates, competence-based agricultural education must be globally aware and locally grounded. This delicate balance does not happen by chance but must be deliberately planned for in all teaching and learning, and research processes and infrastructure. Localization should be seen as a strength, especially in agricultural higher education given its contextual nature. However, we should avoid the elephant analogy of reality where a strong focus on the local issues blinds us to the complexities of these issues on a global scale. There is thus strength in collaboration to foster a complete understanding of the whole picture. This allows us to see the elephant in its totality rather than parts of it. Therefore, solutions can indeed lie within and without.

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Tigran Keryan

# From Vision to Action: My Transformative Journey with APPEAR

*Give a man a fish, and you feed him for a day;  
teach a man to fish, and you feed him for a lifetime.*  
Chinese proverb

## APPEAR as a Catalyst for Transformation

APPEAR was far more than an academic opportunity for me. It became a catalyst that reshaped my understanding of myself, my work, and my responsibilities as a researcher and educator. Looking back, it marks a turning point where personal growth, academic development, and engagement with society became deeply interconnected. In this chapter, I reflect on my journey with APPEAR, from its beginnings to where I stand today, and on how this experience continues to shape my professional and personal vision. Rather than presenting a linear success story, I focus on transformation – how APPEAR challenged my assumptions, broadened my horizons, and encouraged me to move beyond disciplinary, cultural, and institutional boundaries. My aim is not only to describe what I gained, but also to demonstrate how such experiences can shape identity, responsibility, and a long-term commitment to development-oriented research and education.

## Roots and Identity: Where I Come From

My journey begins in Armenia, where I grew up, studied, and worked as both a teacher and a researcher. I was born in Dilijan, a small town located within the territory of a national park. Growing up surrounded by forests, lakes, and mountains deeply shaped my way of seeing the world. From an early age, I spent much of my time in nature. I learned about plants, mush-

rooms, animals, and ecosystems mainly from older generations, through observation, practical experience, and what I would call tacit knowledge. This early connection to nature became the foundation of both my personal values and my professional path.

It was therefore natural that I chose to study geography, with a special focus on social and environmental dimensions. Later, I specialized in sustainable tourism development and nature conservation. I moved to Yerevan, the capital of Armenia, and began my academic journey at Yerevan State University. After graduation, I moved back to my hometown and started working as a schoolteacher, teaching geography and environmental sciences. At the same time, I was actively involved in tourism-related projects, including guiding visitors in protected areas and the sustainable development of national park territories.

These parallel experiences were very formative. On the one hand, I was teaching young students in the classroom; on the other hand, I was engaging directly with landscapes, communities, and visitors. Slowly, I became aware of a gap between academic knowledge and real-world challenges. I realized that much of what I had learned at university was not sufficient to address complex social and environmental problems in practice. I also observed that tourism and economic development in Armenia faced many structural issues, including a lack of specialists who were prepared to work at the intersection of science, society, and policy.

This realization motivated me to start my PhD studies at the Armenian State Pedagogical University. I aimed to contribute to closing this gap between theory and practice and to strengthening the practical relevance of research and education. During this time, I learned about the APPEAR CaucaSusT project and, for the first time, encountered the concept of transdisciplinarity. As I explored this idea further, I felt an immediate connection. It expressed exactly what I had been searching for – a way of doing research that does not stay within academic boundaries but actively engages with society, local knowledge, and real-world problems.

With the encouragement of my supervisor, I decided to apply for an APPEAR scholarship. It was not an easy decision. I had a job that I loved, stable work opportunities, and the possibility of a secure income. Moving to a new country, far from my family, to live on a scholarship in a student dormitory and face a future full of uncertainty meant leaving behind comfort, familiarity, and professional security.

What finally guided my decision was my deep belief in the value of knowledge and my strong desire to continue an academic career in an international and interdisciplinary context. After many conversations with

friends and mentors, one piece of advice stayed with me. A close friend told me, “Listen to your heart.” I decided to do exactly that. Choosing to apply for APPEAR was not only a professional step; it was a personal commitment to growth, to uncertainty, and to transformation. It marked the moment when I consciously chose learning over comfort, curiosity over security, and long-term impact over short-term stability.

## Becoming (and Remaining) an APPEAR Scholar

After completing all the bureaucratic procedures, made much easier thanks to the support of the APPEAR office colleagues, I finally moved to Vienna in 2017 and began my academic journey at BOKU University. This transition marked a new phase in both my professional and personal life. Everything was different: the academic culture, the research environment, and even the rhythm of everyday life.

With the guidance of my supervisor and the support of the CaucaSusT Austrian project team, I gradually immersed myself in a research culture that was new to me. Step by step, I learned what transdisciplinarity means in practice – openness to other forms of knowledge, respect for non-academic actors, and the ability to work across disciplinary boundaries. I also became familiar with a research environment that encouraged critical thinking, independence, and dialogue rather than hierarchy. APPEAR continuously pushed me to move beyond my comfort zone. It encouraged me to question rigid disciplinary structures and to connect scientific inquiry with societal needs. Through this process, my understanding of research changed fundamentally. Research was no longer only about producing academic outputs; it became about responsibility, relevance, and engagement. Equally important was the confidence I gained. I learned to express my ideas in international and interdisciplinary settings and to see my own perspective as valuable. Coming from a different academic and cultural context was no longer something to overcome; it became a strength that enriched collaboration and discussion.

Even in later professional experiences, including my work in Portugal in a very different cultural and academic environment, I carried this identity with me. The mindset I developed through APPEAR, such as openness, reflexivity, and responsibility, continued to shape my choices and professional behavior.

Although I formally completed my APPEAR scholarship years ago, I rarely describe myself as a “former” APPEAR scholar. APPEAR is not something that ends with a certificate or a final report. It is an experience

that stays with you and continues to influence how you think, work, and relate to others.

Studying and working in Austria, especially within the intellectually rich and supportive environment of BOKU University, offered far more than academic training. It provided a space for deep personal transformation. Even after moving to Portugal following my graduation and working on rural development projects, I still strongly felt connected to APPEAR. In many ways, I continue to act and think as an APPEAR scholar today.

## The Bridging Role: Navigating Between Worlds

Being deeply rooted in the Armenian academic and cultural context gave me a strong awareness of both its strengths and its limitations, especially for young researchers. I witnessed the dedication and resilience of many colleagues who work under constrained conditions, often with limited resources and infrastructure. At the same time, I experienced how fragmented academic collaboration can be, and how competition frequently replaces cooperation. Strong disciplinary boundaries, hierarchical structures, and remnants of Soviet-style academic governance still shape many institutional practices. These realities can significantly limit opportunities for younger scholars, particularly those who wish to work in innovative, creative, or participatory ways and to engage more openly with society.

These experiences shaped my sensitivity to context. They also strengthened my belief that sustainable development in research cannot be reduced to infrastructure or funding alone. It must address people, academic cultures, institutional structures, and relationships of trust. Without these elements, even well-designed projects risk losing their long-term impact. This background remains central to who I am. It influences how I formulate research questions, how I work with students, and how I engage with communities and partners. It also shaped how I experienced my doctoral studies at BOKU University, not as a temporary mobility program, but as an encounter with alternative ways of thinking, working, and collaborating. This exposed me to a research culture where cooperation, dialogue, and reflexivity were not exceptions, but expectations.

Over time, I increasingly found myself in a bridging role between Austria and Armenia. I navigated between different cultures, academic systems, and understandings of development, education, and research. This role went far beyond linguistic translation. It involved translating expectations, institutional logics, academic norms, and even unspoken cultural assumptions. Often, it meant helping people understand not only what

others say, but why they say it in a particular way. Scientific cooperation, when approached thoughtfully, becomes a powerful bridge to cultural understanding. Yet such cooperation requires sensitivity, patience, and mutual respect. Development support can take many forms. Investments in infrastructure may create visible and immediate results, but their long-term impact is often uncertain, especially in times of political instability or environmental crisis. In contrast, investment in people creates effects that extend far beyond any single project.

APPEAR's focus on people through education, research, training, and capacity development has shown me how enduring change can be created. Knowledge, skills, and empowered individuals carry their experiences into institutions, classrooms, and communities. They shape new practices, influence future generations, and quietly transform systems from within. In the Armenian context, I have often observed that cooperation between local institutions becomes more effective when it is facilitated or initiated through international partnerships. External actors can create neutral spaces for dialogue and collaboration, reducing internal tensions and opening possibilities for more inclusive and productive cooperation. In this sense, APPEAR projects not only supported individual development but also helped build bridges within the local academic landscape itself.

## Capacity Building as Enduring Development

Austria–Armenia cooperation has a good tradition, yet what distinguishes many APPEAR-supported initiatives is their strong focus on academic culture, long-term engagement, and mutual learning. These investments may not always be immediately visible, but they gradually shape professional ethics, research standards, and attitudes towards responsibility and collaboration across generations.

APPEAR-supported projects have also contributed to the development of academic fields that were previously underrepresented or weakly established in Armenia. One important example is organic agriculture, where long-term cooperation and training have supported the emergence of new expertise and professional networks. In our project EcoServ, the aquatic ecosystem services provide another example of a new field. Through collaboration with international partners such as the Austrian Environmental Agency, Armenian researchers gained access to scientific standards, methodologies, and quality assurance practices that are essential for building credible and policy-relevant environmental research.

The true value of such initiatives becomes visible over time. When graduates of these programs enter public administration, research organizations, or civil society, they carry with them not only technical knowledge but also new ways of thinking and working. They become teachers, supervisors, and mentors for the next generation. If gaps exist in teaching staff or research leadership, their impact is felt for decades. Conversely, when capable and well-trained individuals take on these roles, they create positive effects that multiply across institutions and generations. In Armenia, the outcomes of this approach are slowly becoming visible. Interdisciplinary and transdisciplinary collaboration, once rare, is increasingly practiced. Cooperation between universities, nongovernmental organizations, schools, and local communities has expanded, particularly through participatory research and citizen science initiatives. These new forms of engagement open pathways for more inclusive knowledge production and strengthen the connection between research and everyday life. In fields such as ecosystem services research and limnology, collaborations have introduced international standards that improve both scientific quality and policy relevance. Research results are more frequently discussed beyond academic circles and increasingly inform environmental management and development planning.

These developments are not without challenges. Cooperation does not emerge automatically, even among partners within the same country. Trust must be built, expectations aligned, and communication continuously maintained. In this context, my colleagues and I functioned as an external catalyst, creating frameworks where collaboration became possible and where scientific work and cultural exchange reinforced one another. In the Armenian context, I have repeatedly observed that local cooperation becomes more effective when supported or initiated by international partners and organizations, which can provide both legitimacy and a neutral platform for dialogue. Through this long-term perspective, capacity building reveals itself not as a temporary intervention, but as a form of enduring development, one that slowly reshapes institutions, professional identities, and the relationship between science and society.

## Raising Research Quality and Reframing Development Research

Another important impact of APPEAR has been its contribution to raising research quality and ambition. Development-oriented research is sometimes viewed as less rigorous or less prestigious within academic

environments that prioritize theoretical innovation or laboratory-based disciplines. I encountered such attitudes both before and during my international experiences. Through our projects, this perception was actively challenged. High methodological standards, careful data collection, ethical engagement with communities, and publication in international peer-reviewed journals became central expectations rather than optional goals. Development research was no longer framed as secondary or purely applied work, but as a field capable of producing robust scientific knowledge while remaining deeply connected to societal needs.

For me, this shift was formative. It strengthened my belief that academic excellence and social relevance do not stand in opposition to one another. On the contrary, they can reinforce each other when research questions emerge from real challenges and when scientific methods are applied with rigor and responsibility. This experience also reshaped my understanding of what it means to be a researcher. Beyond technical expertise, I learned that research requires the ability to listen carefully, to communicate across differences, and to collaborate respectfully with people from diverse backgrounds. It involves patience, humility, and the willingness to question one's own assumptions. In this sense, APPEAR helped me grow not only as a scholar but also as a person. It encouraged me to see myself not merely as a producer of knowledge, but as a learner, a mediator, and occasionally a small agent of change within larger systems. These roles are not peripheral to academic identity; they are, in my view, essential to it.

## Looking Forward: From Vision to Action

Reflecting on my journey, from my early experiences in Armenia to my current position, I see that my path has been shaped by challenges and opportunities that pushed me to grow as a researcher, educator, and person. What I have learned is that research and education are not only about knowledge, but also about engagement, dialogue, and transformation. They can connect people, ideas, and communities in ways that extend far beyond individual projects or personal achievements.

Looking ahead, I aim to continue working at the interface of science and society, fostering participatory and transdisciplinary approaches. I want to contribute to capacity development in diverse contexts, support emerging researchers, and help institutions embrace openness, collaboration, and reflexivity. At the same time, I feel a personal responsibility to mentor and guide others, to share the insights I have gained, and to

remain conscious of my own position, privileges, and assumptions. This journey has reinforced a principle that I now hold at the center of my professional life – meaningful change comes not from isolated interventions, but from cultivating knowledge, skills, and responsibility in people who will carry it forward. I have come to understand that transformation is a process, not a destination, and that our choices, actions, and reflections continually shape both our own development and that of those around us.

Finally, my path has taught me that the most lasting impact arises from engagement, persistence, and care. I carry forward the lessons, values, and mindset I developed along the way, and I am committed to translating them into action – whether in research, teaching, or collaboration with communities. My journey is ongoing, and it reminds me daily that growth is personal, relational, and continuous.

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# Retracing Lines of Difference in Understanding Disability Research: Critical Reflections on Challenges and Opportunities in North–South Research Collaborations

## Introduction

This paper derived from a collaboration between four different universities in a so-called North–South academic partnership. It aims to elaborate our continuous discussion of what we mean when we talk about disability, and whether we do, or indeed need to, mean the same thing. The collaboration was funded through the Austrian Partnership Programme in Higher Education and Research for Development (APPEAR) by the Austrian Development Cooperation. This program aims to improve “the learning, teaching and research conditions in countries with limited infrastructure and create new access possibilities to the international scientific community” (APPEAR/OeAD, 2022). While this sentence indicates that it is the partners located in the Global South that need to learn, we will argue that in the context of disability all of the individuals involved can be understood as learners.

The project “Inclusion in Education for Persons with Disabilities” (INEDIS) commenced in 2017 and stemmed from an eighteen-years-long collaboration between Addis Ababa University’s Department of Special Needs and Inclusive Education, and the Department of Education, Research Unit for Special Needs and Inclusive Education at the University of Vienna. Working in the broader context of inclusive higher education and the needs of students with disabilities, we kept returning to uncertainty around a common understanding of the terminologies of disability and inclusion, whether a common understanding was even possible, whether it was needed at all, and, if so, how we could go about achiev-

ing one. The fuzziness and elusiveness of the understanding of the term “disability” in different cultural and epistemological contexts continued to loom over our collaboration. Sometimes, we had to ask ourselves whether we were talking about the same thing. Do commonly agreed-upon – and thereby mostly Westernized – definitions serve any purpose in the pursuit of a common understanding?

Common models of disability proved to be inflexible, one-sided, and Eurocentric, providing a specific idea as base for a common definition, due in part to a larger extent of state-driven influence in regard to health care, social security, and antidiscrimination laws. What, in the Austrian context, seemed to be obviously insufficient with regards to supportive structures for persons with disabilities proved far out of reach in the Ethiopian context. The opposite held true for systems of family-driven support networks and clerically organized structures. These arguments seemed to be too superficial, and, thus, brought about the question whether a definition and common understanding was needed, and, if so, for whom. It might be needed for reporting on findings for funders and impacting policies, but what about for research activities? What do we need among an (intercultural) research team during everyday project activities? These questions kept recurring.

This generated a discussion about the relevance of different underlying perceptions of disability and approaches to disability research from Ethiopian and Austrian perspectives within our research collaboration. Moreover, as we were questioning nationalist and localist perspectives we asked ourselves what had shaped our personal views, what had fused certain perspectives on disability, and how we were communicating about these. Notions of disability already prove complex in one localized institutional or national setting, as understandings diverge (Naraian & Amrhein, 2020). What’s more, all sorts of discussions emerged related to explicit, semi-explicit, and/or implicit questions in the context of North–South research collaborations. These ranged from conceptual discussions about disability, research, and knowledge to practical questions relating to research practice, data collection, sampling, analysis, field research, literature reviews, and publications. The aim of this paper is to critically reflect on our own positions, expectations, and experiences relating to those questions throughout the joint research process in INEDIS. Hand in hand with this goes the question of the possible depth of North–South collaborations and a need to question the applied terminology.

In the next section, we will frame our discussion by reflecting on current perceived epistemologies of the South and corresponding notions of disability (research). A brief insight into the project and our methods of

reflection, data generation, and analysis provides the context of our discussion of disability research practice in this paper. After an overview of general findings, we will engage in a more detailed reflection of two spheres that emerged from the data analysis: Epistemology & Knowledge and Disability Models & Approaches. The paper concludes by presenting some implications of North–South collaborations in (disability) research.

## Theoretical Background – Non-Contextualized Differences?

Various studies ascertain that research approaches and theories on disabilities in the Global South often derive from the Global North (Cutajar & Adjoe, 2016; Grech, 2011). It is commonly conceived that research based on indigenous contexts of the Global South is viewed as specific to those contexts, rather than as a knowledge source, and is rarely used in theorizing disability research in the Global North. Western epistemologies are fully imposed on the Global South (Grech & Soldatic, 2014) as they are considered to be more credible, and globally applicable regardless of contextual differences (Cutajar & Adjoe, 2016).

Similarly, globally generalized Western epistemologies are practiced within disability studies and theories in the Global South, challenging the application of non-contextual epistemologies (Grech & Soldatic, 2014). We know that the implementation of inclusive education is very challenging in lots of countries and especially in the Global South. One problem, identified by Grech (2011) and Kalyanpur (2014), is that the Western concept of inclusive education is sometimes implemented in the Global South without consideration of possible differences in culture, context, and societies. They argue that, in the Western context, inclusive education starts from a well-equipped segregation system that aims to change into a well-equipped inclusive education system. In the case of the Global South, however, the process starts with poorly equipped segregation systems and aims to develop towards regular education settings (Artiles & Dyson, 2005). As much as the Global North had to, and still needs to, reframe and decolonize its approaches and refrain from dominating discourses, disability research in the Global South has to come up with its own visibility, relying on theoretically and empirically informed work to develop indigenous research and practices (Grech & Soldatic, 2014).

Over the course of our project, it became clear that we face certain challenges in research related to knowledge and epistemologies of the Global North and South. The issue we wanted to take a closer look at

relates to conceptualizations in different cultural contexts. By conceptualization we mean everything it takes to define a certain phenomenon. The concept of a phenomenon or term provides us with the information and description we need to be able to deal with it – to know what to do and say, how to approach it, and how to include it in our lived realities.

Much has been written about the strong relation between theory, interpretation, culture, and decision-making. Eskay et al. (2012) state that it is often assumed that decisions taken and service provisions given in countries in the Global South originate in the Global South, but the interpretations that are made on the way of working towards decisions might tend to lose their cultural and context-bound roots. Cultural perspectives that respond to socioeconomic and societal institutions are essential for looking at disability on a theoretical level (Eskay et al., 2012). Therefore, the complexity of community, indigenous knowledge, perspectives, and methods used needs to be considered when doing research on disability in the Global South. This is especially important when developing new knowledge (Eide et al., 2014).

In the literature, we find lots of critical approaches to Northern epistemology, methodology, and conceptualizations related to disability research (Meekosha, 2011), on decolonizing disability (Smith, 2012), on decolonizing methodologies (Connell, 2007), on Southern theory (de Sousa Santos, 2014), and on epistemologies of the South, as well as Soldatic and Grech's 2016 critical handbook on disability in the Global South. In her paper on critical disability studies and Southern theory, Nguyen (2018, p.2) states:

*First, the use of Southern theory enables us to interrogate the domination of Northern epistemologies in Southern contexts; second, this theory unveils how colonialism has continued to manifest itself through the knowledge practices which have made the experiences of disabled people in the Global South invisible; and finally, situated within the context of global development, this theory enables critical disability studies to act as a project of decolonization that engages with indigenous ways of knowing about disability experiences.*

Epistemological theory is not about one or another way of gaining knowledge, but about the awareness that there is more than only one way. For de Sousa Santos (2018, p. 296) the dominance of Western epistemologies has led to “massive epistemicide”. In other words, other ways of knowing were ignored or destroyed by colonial societies’ way of thinking. Epistemologies from the Global South aim at highlighting the problem of having only one epistemology that embraces the criteria of valid knowledge (de Sousa

Santos, 2018, p. 8). De Sousa Santos continues his argument by emphasizing that this destruction has led to disempowerment. This means that perspectives of whole societies were ignored and the right of using their own terms for describing their realities was taken from them. This has led to a sense of powerlessness, and inability to consider “the world as susceptible to being changed by their own power and for their own objectives” (de Sousa Santos, 2018, p. 8).

Looking critically at epistemology, we need to consider that there might be other ways of finding knowledge that is meaningful in different ways to different communities. To be able to identify knowledge that is relevant to a certain community, we need to be very clear about the conditions that led to these results: “epistemology today has to do with the analysis of the conditions of identification and validation of knowledge in general, as well as justified belief” (de Sousa Santos, 2018, p. 2). We can assume that different epistemologies exist because we can’t assume that Western epistemologies represent the only ways to create knowledge. In other words, we must assume that our world contains epistemological diversity (de Sousa Santos, 2018, p. 8). De Sousa Santos (2018, p. 2) defines two levels on which epistemologies of the South challenge epistemologies that are relevant today:

*On the one hand, they consider it a crucial task to identify and discuss the validity of knowledges and ways of knowing not recognized as such by the dominant epistemologies. Their focus is thus on non-existent knowledges, deemed as such either because they are produced by absent subjects, subjects deemed incapable of producing valid knowledge due to their subhuman condition or nature.*

De Sousa Santos further discusses the importance of Southern epistemologies and connects the process of working from this perspective with a “sociology of absences” (2018, p. 2). The essential basis is thereby described by “turning absent subjects into present subjects as the foremost condition for identifying and validating knowledges” (de Sousa Santos, 2018, p. 2). De Sousa Santos’s definition of Southern epistemologies makes it clear that we need to open a discussion that gives way to new possibilities of creating knowledge. This is especially important when working outside Western (research) traditions, but also within Western academic traditions (to identify validity). The following discussion about disability in a heterogenous research environment touches on elements of de Sousa Santos’s theory. It takes the potential results of a study and looks at them from different perspectives, trying to identify new pathways for epistemo-

logical approaches. In the center of these theoretical analyses are different ways of conceptualizing disability. For this paper, our research team consisted of Austrian and Ethiopian researchers from four universities and our exchanges centered on the concept of disability.

## Research Background

The starting point of our discussion derived from a set of project collaborations within programs of North–South research-funding schemes. Since the beginning, in 2007, different universities have been involved at different times. The most recent project (2017–2020) consisted of a consortium of four universities: Addis Ababa University was project coordinator, Dilla University and the University of Gondar were project partners in Ethiopia, and the University of Vienna was project partner in Austria. The project “Inclusion in Education for Persons with Disabilities” (INEDIS) focused on capacity-building at higher education institutions (HEIs) to facilitate inclusive education for students with disabilities and strengthening the ability of HEIs to contribute to inclusive community and school development, with special focus on the intersection of gender and disability. The three areas of the project have been derived from previous research and a needs assessment carried out by the consortium while developing the project. The three thematic areas were:

- (i) Strengthening the capacities of Ethiopian universities to support students with disabilities. The main activities included empowering students with disabilities at universities, further developing research and teaching capacities on disability and inclusion, and increasing accessibility to study programs and facilities.
- (ii) Facilitating research and teaching with respect to gender and disability, and developing direct measures to empower female students with disabilities in education and the labor market.
- (iii) Enhancing knowledge, skills, and competencies of academic staff to research, and teach issues of inclusive community and school development. The emphasis of the project activities has been on capacity building for research, teaching, and management as well as exchanging research findings and knowledge within the consortium as well as with other stakeholders.

With respect to the project objectives and the funding scheme, the research team considered the project to have successfully achieved its

targets, including additional activities and outcomes. Each consortium member took over responsibilities for components of the project and corresponding management and coordination tasks. Challenges and issues, especially those at the institutional level stemming from administrative barriers and new consortium members, have been discussed intensively. Most challenges have been resolved by awareness-raising activities and the invitation of key university stakeholders into the project, even generating additional support within the institutions. Nevertheless, a central point for discussions among the team members revolved around different expectations, partly stemming from different research practices in the participating universities as well as programs and guidelines with respect to international research collaboration (i.e., APPEAR funding schemes and partner institutions). Perpetually looming over all of this was the question of whether what we had proposed to the funding agency could successfully be realized with rather different approaches to disability.

Apart from institutional challenges, a key discussion point during the whole project leads back to concepts of disability and approaches to disability research, thus epistemology and methodology, as discussed in the next section. The research interest that finally emerged from various discussions amongst researchers was to question the need for a joint understanding of disability per se, leading to the following research question:

*What are potential pitfalls, aspects, conditions, contexts, or effects of developing a joint understanding of disability research practice and collaboration?*

While asking this question, the issue of whether this was necessary was always at the backs of our minds. Following the research question, a qualitative approach was selected for data generation and analysis. To engage in the discussion in a more systematic manner, a questionnaire was developed and focus group discussions were conducted. Part of the data was extracted from the group discussion and part of it from a questionnaire, both conducted with participants of the INEDIS project closing workshop at the University of Vienna from the 26th until the 30th of August 2019, and digital follow-up reflections and joint content-based analyses thereafter. The latter process proved lengthy due to limited possibilities to exchange digitally with colleagues from Ethiopia. Restricted internet access led to postponed meetings and put a strain on the initial plan to work on data collaboratively.

The questionnaire was jointly developed by the members of the project consortium of partners from Austria and Ethiopia. It consisted of nine

open questions and was filled out by eleven workshop participants. The open questions covered issues that focused on the project itself, like internal collaboration and communication, and on aspects of joint research and project activities, concepts of disability, and research methodology. Participants were asked to fill out the questionnaire in written form until the end of the workshop. Selected questions were used to conduct focus group discussions with team members of the research team. With a more specific focus on research perspectives, a focus group discussion was held on one of the workshop days with nine participants, representing all consortium members. It started with one open initial question, which was discussed among the participants. Both the handwritten answers to the questionnaires and the audio recordings of the group discussions were later transcribed in digital form.

After collecting and preprocessing, the data was analyzed with the research perspective to highlight contrasts between different opinions and points of view. In a first step, specific lines of differences in passages of the material were extracted and analyzed based on strategies of discourse analysis by Wrana (2014). During this process, analytical themes were outlined which were later merged into six preliminary categories. These were again contrasted and compared with the data material and enriched with content from the transcripts of the group discussion and the questionnaires.

## Findings

As seen in the section about the theoretical background, (disability) research in North–South research settings spans complex contexts. To better understand our own positions, expectations, and experiences during the joint research process in INEDIS, we identified six key areas from the data analysis: Personal Positions, Institutions, History, Purpose & Objectives, Disability Models & Approaches, and Epistemology & Knowledge. They each represent different aspects of thinking about and working on disability research. We decided to refer to these areas as “spheres” to better capture how they intersect and affect each other.

The following figure gives an overview of the spheres identified in the data analysis. These spheres reflect different areas that should be regarded in a research cooperation where different approaches to disability and disability research prevail. In all the spheres we found that the layer North <> South plays an important role in shaping the discourses within each sphere, while at the same time connecting them to one another,

as illustrated in the examples given when presenting the spheres below. Rather than identifying differences between the North and the South, we use this layer as an analytical tool to retrace associated ideas of relevance, power relations, and values within each sphere. After giving a brief overview of each of the spheres and their complex connections, the subsections engage in a more detailed discussion of the spheres Epistemology & Knowledge and Disability Models & Approaches.

The sphere Personal Positions combines aspects that point to the characteristics of the individual researchers involved. In the questionnaires, and more prominently in the focus group discussion, the participants frequently referred to their own social status, professional background, and personal biography when arguing for specific perspectives and practices of doing research. They also noted that, in general, attitudes towards and/or awareness of disability strongly influenced the conceptualization and implementation of disability research. While this finding fits well with existing research on attitudes towards disability (Gaad, 2004), one aspect affects disability research with respect to our project, namely the extent of international experience in different settings (i.e., the Global South and North).

Closely linked to personal positions are the spheres of Institutions and History. On the one hand, the participants positioned themselves within specific societal, political, and institutional frames to justify their own practices and arguments. Participants frequently referred to their own roles as researchers and university lecturers when providing students, pro-

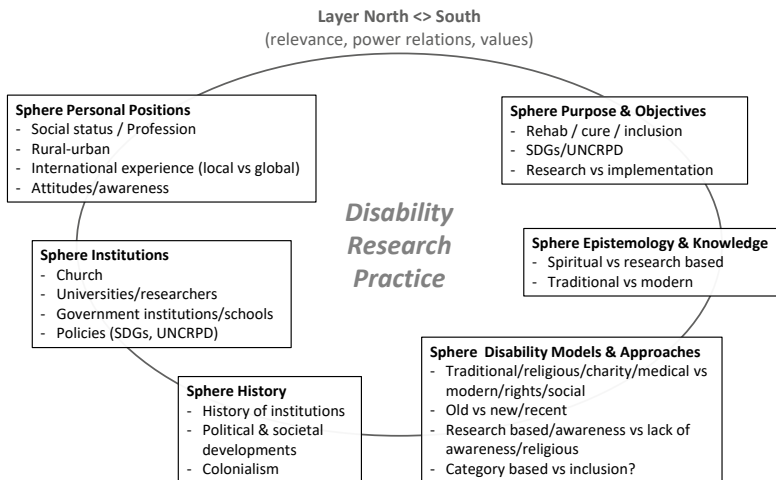


Fig. 1: Map of spheres

professionals, and the public with knowledge and guiding practices for how to understand disability and implement inclusion. A collective “we” was often used to refer to their own position as academic staff within the university context, which is seen in the position to spread specific “advanced” knowledge to the people of Ethiopia or the South. On the other hand, the institutional and general societal contexts, as well as the historical developments, play an important role in shaping personal experiences and practices. The university context, for example, is portrayed as enabling the gaining of “advanced” knowledge through access to the scientific discourse in journals and books, by contrast with the public in urban areas and – even more so – in rural areas. It also provides opportunities to connect with the scientific communities in teaching and research, such as in the case of our research collaboration.

This links to the sphere Purpose & Objectives, which relates to the different outcomes and goals of disability research practice. Most notably, all participants pointed to the shared objective of initiating and guiding change towards a more inclusive society, despite varying views on specific outcomes, means, and approaches. At the same time, participants identified barriers stemming from divergent perspectives linked to Northern and Southern backgrounds within the spheres Institutions, History, and Objectives & Purposes, e.g., as present in the funding scheme of our research collaboration.

When discussing different disability models and approaches, personal positions and institutional aspects (including purposes and objectives) such as administrative requirements of funding schemes, institutional guidelines and governmental regulations, as well as individual experiences, were often explicitly mentioned and debated. In contrast, historical developments of institutions and the political and societal contexts were generally only mentioned with reference to the sphere Epistemology & Knowledge. As illustrated, perspectives on epistemology and knowledge not only affect the practice of doing disability research but form the foundation of our understanding of disability and research, thus putting the sphere Epistemology & Knowledge in a unique position within our findings. In the following, we choose two spheres that proved especially poignant in the process of analysis to illustrate our findings in more detail and discuss the analytic strength of our approach.

## Disability Models & Approaches

Researchers from different disciplines such as medicine, rehabilitation, psychology, and education refer to models of disability that vary greatly. Apart from the medical and social model approach, there are several other models that promote intersectoral approaches and thinking about disability. However, it is still debated whether these models benefit people with disabilities (Llewellyn & Hogan, 2000).

This underlines the importance of looking into different global, international, transcultural, and national approaches to disability and how these are affected by beliefs, policies, and other factors such as professional or international training. Moreover, approaches towards the terminology and understanding of disability in general vary according to a person's or a collective's convictions, history, culture, tradition, personal background, and experiences, etc. Additionally, cultural and societal as well as legal matters affect common perceptions and understandings (Waldschmidt, 2005). Thus, fusing different cultural approaches towards the phenomenon in the context of international research collaborations can lead to misunderstandings, potential for (re-)creation, and – in the worst case – friction. Work and negotiation are needed to refocus and put these into a common research framework that is also in accordance with the funding agency's overall ideas, or meeting criteria for evaluation.

In terms of the given collaborative network of researchers, it is important to mention that both international research experience and personal experience of disability shaped the navigation process of finding common ground. As the funding program targeted research collaboration, all partners involved were professionals in the areas of psychology or education studies and had been practicing research in both international and disability-related contexts for at least five years. Thus, knowledge was fueled by an already highly sensitized perception of disability. Our scientific understanding has been shaped by a majority discourse that differs from our local research traditions, which in the case of Austria remain strongly shaped by a historically differentiated system of special vs. inclusive education. It does cause a certain level of system change that enables a strong community of DPOs to fast-forward their agenda. Ethiopia, on the other hand, adapted current global policy documents and used these to infuse updated policies. Where there was a lack in addressing some children's education, there are now state-of-the-art (Westernized) policies that sometimes do not match reality. The implementation of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) has brought change to these respective national contexts but in dissimi-

lar ways. Additionally, as will be shown, the implementations within the countries themselves also vary and reach beyond an urban-rural divide. Knowledges are thus infused by different aspects.

Closely related to the production of knowledge, the sphere Disability Models & Approaches shows different levels of how to approach and work with the topic of disability. Figure 2 introduces a possibility of looking at different perceptions of disability in relation to the production of knowledge. If cultural and traditional knowledge is valued and perceived as important and is considered to hold a large amount of information, the corresponding models of disability (religious, traditional, charity) prevail. These point to the fact that religious perceptions and principles such as humanity remain important concepts in relation to perceptions of people with disabilities. The following quote by one of the Ethiopian project partners shows that traditional approaches often remain relevant despite other developments:

*Regarding the approach especially our countries or in our context – because it’s almost we are in a traditional model or traditional approach – especially dominated by charity model and religious aspects – of course most of our communities still attach the cause of disability – with evil spirit or – that’s related with some religious aspect that’s why – they took to holy water or traditional healers. When you come to the support provisions – of course – by the way we perceive disability can have its own impact on – its own effect on the way you intervene. The way we intervene. (project transcript, p. 188–195)*

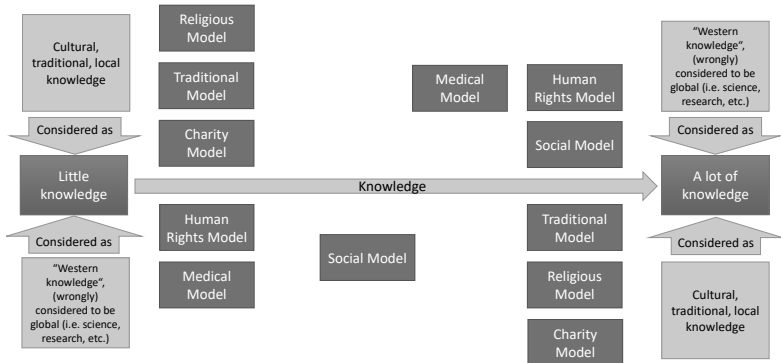


Fig. 2: Models of disability related to perceptions of knowledge

When changing perspectives and considering cultural and traditional knowledge as less valuable, models related to Western knowledge (social, human rights, medical) come to the fore. This theoretical application of an exaggerated perspective on models of disabilities in relation to North and South also reflects prejudices and potential bias.

The following quotation marks a distinct line that is being drawn between a focus on the social model approach to disability ascribed to the North, and the charity-oriented model of the South, specifically Ethiopia:

*The approach to disability in our country – is very much dominated with the traditional approach – very small number of people with disabilities are coming to school. But the majority are just dependent on the charity – which is different from the North – charity means you know they give – some alms – for – daily life. A significant number of persons with disabilities are in the gate of the church and the mosque to get alms. So, this is – our approach, very much dominant. (project transcript, p. 29–40)*

In this short passage, we can identify a clear demarcation: “which is different from the North.” Without any mention, it appears clear that there is a perceived or understood difference between the charity-oriented approach of the Southern and the Northern approach. The lack of school attendance is also pointed out as a central category of difference, where the lack of access to education is described as characteristic of the charity-based model, as contrasted with the Northern model, which enables people with disabilities to attend school. The interviewee also refers to this as “our” approach. Places of worship and cultural practices are marked as relevant differences.

## Epistemology & Knowledge

When producing knowledge, researchers refer to different epistemological grounds. Usually, the epistemology they follow is based on theories developed in the North. In the context of our research team from the Global South and North, we must raise questions about the conditions of knowledge production and choice. For instance, as a researcher, am I free to follow my epistemological convictions and considerations? What if I cannot agree with the epistemological basis developed by the Global North? The term “epistemic humility” (e.g., Walker & Martinez-Vargas, 2020) fits our

considerations very well. It disposes epistemology from a predefined and unchangeable frame.

Looking at our data, we began by connecting “knowledge” and “models of disability,” as many models were addressed in the data. These models were usually referred to in terms of traditional or old models, contrasted with more recent and developed models. Hence, knowledge and maybe also research seemed to be the crucial variable to identify models on two ends of a scale. The high knowledge end of the scale was referred to as Western, developed, and advanced, and something to be aimed at. The lower knowledge end was more attributed to models that missed certain aspects of the Western perspective, and were one-dimensional, or based on traditional knowledge. Approaching these outcomes from a critical perspective, we must look at knowledge, knowledge production, and finally at epistemology, as mentioned above. To be more precise: If we take the aforementioned knowledge scale and mirror the high-knowledge end representing Western knowledge with cultural, traditional, and/or local knowledge on the other end, we open the discussion for issues around epistemic hegemony and epistemic humility (see Fig. 2).

Walker and Martinez-Vargas (2020, p. 3) emphasize that “recentering requires challenging West-centric knowledge production.” We cannot assume that Western-produced knowledge is the only valid way to work in science. Therefore, this paper analyzes issues around South–North differences in research cooperation. Walker and Martinez-Vargas ask questions about Southern researchers and inquire about whether their freedoms in research are deprived. In our paper, however, we are trying to identify moments where these research freedoms could be implemented or have been limited. The results reveal that the ability to identify meaningful and valid knowledge depends on the perspective or the epistemological standpoint. As mentioned in the theoretical background section, Southern epistemologies would be able to identify knowledge in a different manner, with different meanings (for local people and communities), yielding a different impact. Engaging with Southern epistemologies by looking only at the results (we have excluded data generation, etc.) enables communities to empower themselves, to influence the realities they live in and to change them if needed. In the previous section this can be seen in the overview of models of disability. Additionally, it needs to be said that Southern epistemologies can also be applied in the North and are meaningful there as they empower local communities and societies.

## Conclusion

The concept of disability is present in many different countries and cultures. On the one hand, this indicates a concept in constant transformation, but it also indicates that it varies profoundly in different regions of the world. If we are moving in an entity that works with the same concept for a certain phenomenon, it is easy to exchange about and work or live with it. As soon as we leave this comfort zone, we enter a zone of bargaining around the meaning and significations of certain concepts and phenomena.

Rioux et al. (2016) address the importance of considering the latter and underline the idea of a localized approach (see also Schiemer, 2017). Grischow et al. (2021) exemplified this for a North–South collaboration, focusing on research conducted in Ghana. Additionally, they point towards the fact that one of the “potential problem(s) is connected to the Northern origins of social science methodologies (including Disability Studies)” (p. 169). In this paper, by reflecting our own ways of producing knowledge about disability in a collaborative research project, we aimed to go beyond localized and methodological questions and work to further elaborate possible intersections and overlays. Despite the scope of our reflections being limited to the practice and experiences of our project team members, our analysis allows for a better understanding of challenges and strategies in disability research in diverse settings, as well as a critical reflection on research funding schemes.

The different spheres that have been identified in this paper show that there are various aspects that need to be regarded in a critical analysis of intercultural collaboration in research on disability. For this paper, the focus was put on only two of these spheres. The spheres Disability Models & Approaches and Epistemology & Knowledge provide the possibility of looking at the phenomenon of disability from a certain perspective. This perspective allows a view on how disability is approached in different cultures. Looking at different perspectives in such a way can unveil knowledge that might be valued differently in different cultures.

We know that changing perspectives is not always an easy task. But by looking closer at terminology used in research, especially in cross-cultural research, we identify the need to analyze, e.g., different points of departure. Disability as a phenomenon is very complex.

The analysis of the data shows a clear tendency towards Western epistemologies. Introducing or using Southern epistemologies in this research collaboration has not appeared to be a given. However, the concept of disability is not one that is clearly defined, allowing researchers to dive into

realities of whichever culture/tradition/environment. This is a common challenge when working on international and intercultural projects. A Western-rooted epistemology will have blind spots. And not only blind spots but blind areas which cannot be discovered without a change in perspective. We know that the Western epistemological and theoretical approach towards disability is only one issue regarding perspectives that influence practices related to the field of disability in the Global South. On the practical level this has further consequences. Srivastava et al. state that “in developing countries the implementation of inclusive education is basically undertaken by the NGOs instead of a country’s government” (2015, p. 190). Furthermore, Grech (2011, p.88) adds that:

*Overall, the epistemological disengagement from majority world disability not only sustains the little knowledge about disability in the Global South (Miles and Ahuja 2007) but also has given rise to a discourse characterised by inferences and generalisations from North to South, where the Western knowledge and practices homogenise, assume and dictate, and where critical issues related to context, culture, economy, history, community and relationships of power among others are often bypassed or reframed to accommodate a minority world view.*

As researchers, we must be aware that we need to take different concepts into account when working in/with other cultures and traditions. Once we have begun conducting research in a new environment, how can we know that the way we experience differences in concepts is accessible to other people? Are we able to explain our experiences and is this of any importance to the new environment? These questions also refer to knowledge production and ways in which knowledge is gained. We are talking about engaging Southern and Northern researchers in discussions on epistemology.

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# Renewable Energies as a Key Point for Improving Quality of Life

FH Joanneum (FHJ) offers international students a wide range of opportunities to attend a semester or complete a course of study. The Institute of Energy, Transport and Environmental Management has had the two master's degree programs Energy Technologies, and Mobility Technologies for over 20 years. A completely new master's program is European Green Transformation, which is largely offered as an online course. To give all applicants the opportunity to study in Austria, online interviews are conducted as part of the admission procedure and extensive counselling services are offered. Since these personal interviews are conducted with all candidates, we get a good overview of the educational standards in the respective continents or countries and the knowledge of the topics of energy and mobility behavior, as well as the awareness of climate change. Depending on previous education and desired specialization, basic technical requirements for the master's program are required. The candidates are therefore sent a questionnaire in advance, for which they must prepare. Since COVID, the interviews have been held exclusively online in the form of video conferences. The broad mass of applicants finds remarkably good answers to the questions asked, although there are also outliers.

In these interviews, we clearly communicated in advance that a study place requires a certain willingness to learn to be able to successfully complete the studies. After an internal ranking of applicants, the free study places are selected and allocated. Once we arrive in Kapfenberg, we have face-to-face contact with the new students for the first time and get to know them personally. This is always a very exciting moment, as very interesting personalities and exciting life stories are often hidden behind the application documents and the online interviews; the students now exist in person.

The introductory phase of studies is therefore always characterized by getting to know the personalities and forming the group. We start very early in the semester with project work, where it is necessary to work together in smaller groups. This phase is very formative for most students, as they are now on their own in terms of teamwork and communication.

Different cultures, levels of education, language skills, and interests collide. A supervisor is very much challenged here to mediate and explain, but ultimately not to lose sight of the goal of imparting knowledge. Finally, when the group results are presented, the team is challenged to explain, argue, and defend the jointly gained knowledge in front of others.

It has been shown that in many other countries enormous importance is attached to the written reproduction of knowledge. A practice-oriented project, which must be developed over a semester, presents students with many challenges; the learning curve is enormously high due to the practical relevance and the teamwork. Excursions into industry are also a fixed point, which on the one hand underpin the theoretical knowledge learned and on the other hand have a beneficial effect on the motivation to learn.

In addition to the transfer of knowledge, we at the institute attach great importance to the SDGs of the UN. To convey the importance of the SDGs in a playful way, we have established a cross-degree simulation game, "Climate Cinema." In addition to our master's students, students from other fields of study are invited to participate. It therefore represents a sublime opportunity for cultural exchange within the entire department of Building, Environment and Society. This seminar is very popular with students and was also awarded the Teaching Award at FH Joanneum.

Over the years, several ERASMUS partnerships have emerged. There is a regular exchange with the University of Lesotho. The incoming students stay at our institute for one semester and take part in various lectures. During their stay, they can earn corresponding ECTS credits and have them credited at their home university. Very committed students are in close contact with the professors at our institute to receive appropriate input for their master's thesis.

This is exactly how the transfer of knowledge to third countries should take place. Interested students come to our university to complete a semester or successfully complete a course of study and spread their acquired knowledge in their home country. Several positive examples could be mentioned here. Another opportunity to disseminate knowledge about renewable energies and innovative mobility technologies takes place within the framework of international projects. We have already been able to participate in several bilateral and multilateral cooperations. One of the most successful was the one with the University of Zambeze in Mozambique.

The RETEM project, funded by APPEAR, has focused on raising awareness and knowledge about renewable energy. A bachelor's degree program has been developed that teaches different focuses on sustaina-

ble energy production and distribution as well as energy efficiency and saving. The FHJ as actively involved as a partner in the creation of the curriculum as well as in the teaching of content.

To get to know the special needs of the people and the situation in Mozambique, the team was on site two times at the Chimoio campus. The two visits proved to be enormously important, because a project of this kind can only be carried out inadequately with online meetings. Only by being present on site can we get an impression of the real living conditions and the situation of the population. Often a visit to the university campus outside the village simply fails due to insufficient public transport or heavy rain, which makes driving on the muddy roads impossible. During the visits, we got a lasting impression of the ongoing infrastructure projects in Mozambique. A highway from the port of Beira to the border with Zimbabwe was still under construction on the first visit; a year and a half later it was already in operation, but more on that later.

Mozambique is one of the countries most affected by climate change in Africa and is facing major negative environmental, social, and economic impacts. In recent years, the frequency and intensity of climate-change-related extreme weather events have increased. This has further exacerbated the country's existing problems, such as food insecurity, poverty, and damage to infrastructure. Mozambique is a country that is particularly rich in resources in the field of renewable energies and thus also has a particularly high potential for the use of solar energy of all kinds. Due to its geographical location in southeastern Africa, Mozambique not only has a subtropical climate that is favorable for agricultural use, but also warm temperatures and a high number of hours of sunshine all year round. This offers an optimal starting position and high potential for the use of solar energy for hot water preparation and electricity generation.

Despite its strong upswing in recent years, Mozambique is struggling with the availability and reliability of its energy supply, especially in rural areas. Small, local off-grid systems of thermal solar and photovoltaic systems, which are used to supply individual households or small settlement communities, can provide a remedy here. In addition to the solar energy potential, there is enormous wind potential along the coasts as it is one of the windiest countries in Africa. Last year, the African Development Bank announced a loan for the construction of their first wind farm. The Namaacha Wind Power Station will have a capacity of 120MW and produce 332GWh of electricity annually. In the project planning, therefore, over 2,700 full load hours are assumed; in comparison, wind farms in Austria have between 1,500 and 2,100 full load hours. This one key figure alone shows the enormous energy potential. The state-owned electricity

supplier Electricidade de Mozambique (EDM) is expected to be the only customer for the next 25 years.

The construction and operation of power generation plants and the necessary power grids is expensive. Therefore, financing from international financing agencies such as the African Development Bank, World Bank or other investors is required. The financing of the Namaacha Wind Power Station is therefore a positive example.

A contrary example of the construction of infrastructure is the construction of the highway from the coastal city of Beira to the interior of Zimbabwe, which was financed and built by Chinese investors. During my two stays, I was able to observe the progress of the motorway construction. The motorway runs like a straight line through the interior, with several toll booths. Since compatriots cannot/do not want to pay the toll, high walls were erected around the booths to prevent bypassing without paying. As a result, there is now a motorway but it is hardly used by compatriots.

The fact that Mozambique is in a climate region that is repeatedly hit by extreme weather disasters was mercilessly demonstrated to us during the three-year duration of the project. Cyclone Idai struck the port city of Beira in March 2019 and left a trail of devastation directly through the city. Countless buildings including the university building were almost completely destroyed.

On our second visit, we were able to see the extent of the devastation for ourselves. In conversations with the local population and a rescue team, we realized how important it is to be able to help oneself in such situations. Waiting for outside help means much more sacrifice in such situations, as epidemics spread quickly. Therefore, clean drinking water and the associated availability of electricity for the operation of the water pumps is a key to mitigating the extent of the disaster.

This is exactly where we started our project and developed a focus on stand-alone systems for the operation of water pumps or irrigation systems using independent PV systems. To understand the functioning of the individual components and the overall system, we were able to purchase a laboratory kit for renewable technologies, which was very popular in the training of university lecturers and students. We hope to have contributed a step in the right direction with our project.

Another infrastructure project was implemented several decades ago and can look back on an eventful history. From the Cahora Bassa Dam in northern Mozambique, a high-voltage direct current transmission line runs over a length of about 900km into neighboring South Africa to the conurbations of Johannesburg and Pretoria. This line went into

operation in 1979, but was damaged, taken out of service, repaired, and operated again several times. The causes are manifold. First, several electricity pylons were blown up during the civil war to interrupt operations, which the rebels succeeded in doing for 17 years. The steel of the masts was also mined or stolen to use for other purposes. After the civil war, the high-voltage line was renovated and put back into operation in 1998. A few years later, the power was refurbished and upgraded, but shortly afterwards there was massive flooding, and some pylons were washed out and toppled over as a result. The renewed redevelopment ran through an area of the former civil war and was equipped with landmines. It therefore first had to be cleared of mines by an armaments company specializing in this area. Due to the impassable terrain, the work was mainly carried out with helicopters. And finally, Cyclone Idai also caused considerable damage to the high-voltage line and caused some of the electricity pylons to fall again. The energy transmission was therefore once again interrupted, which led to considerable energy bottlenecks in the neighboring country.

The example of these infrastructure projects shows that in addition to the political will and financing of projects, other factors play an important role. In a crisis-ridden country like Mozambique, in addition to catastrophic weather events, acts of war also pose a considerable danger that must be considered. Large infrastructure projects such as a transmission line or highway through an entire country are directly linked to a dependence on incalculable risks. Even though South Africa has financed the power line for the transport of energy, or China the highway for the transport of raw materials, no one can guarantee the supply of electricity or access to raw materials. The attacks in the civil war and the severe weather events both lead to this unpleasant realization.

There is therefore still a long way to go to achieve SDG 7, “affordable and clean energy.” According to UN goals, this should be implemented by 2030. Due to the unstable situation in countries such as Mozambique, it is questionable whether this goal can be achieved in the foreseeable future. As already described, a solution for the local population could be in small, decentralized, renewable generation units. Renewable energies not only have the advantage in that they are now cheaper than fossil fuels but, of course, also cause fewer climate-damaging emissions and are therefore more sustainable. For the local population, this also means independence from foreign financial aid and enables a positive development of the market economy. With renewable energies, the necessary electricity can be generated independently of energy prices on the world market. This independence also offers a certain security and predictability. The investments

are relatively low and scalable. Existing systems can be expanded without much effort.

Coming back to our visits to Mozambique, we were welcomed very warmly and respectfully by the host university Zambeze. Although the Chimoio campus does not have much to offer, the professors in charge have nevertheless managed to set up an extraordinarily good course of study and to enable interested young people to receive an education year after year. Despite the mediocre equipment, there is a large rush for the study places to be allocated. In the seminars, not only is frontal teaching held, but there is enough space for lively discussions. We got the impression that more than the minimum amount of time is spent at university, and that young people are aware that education and ambition are key to their future. Despite, or perhaps, the country being marked by various natural and political catastrophes, there is a remarkably positive mood at the university. There is not only purposeful learning, but also a lot of laughter. We were invited several times to go out for dinner together and felt part of the community and welcome. We had the opportunity to have long and profound conversations and laugh a lot together. The African proverb “You have the clock, we have the time” has not proven true in its meaning. We were given the feeling that they were taking time for us and not that we were being kept waiting. Thanks, at this point go to Prof. Luis Cristovao.

In addition to the professional exchange, we were able to bring personal experience and cultural exchange and learn a lesson in respectful interaction with project partners. This life experience is very important in dealing with some of the problems of our incoming students. Respectful interaction and understanding of personal problems are more successful with this life experience.

In summary, I would like to emphasize how important it is to treat students from different cultural and educational backgrounds with respect and to show understanding of everyone’s problems. It is often expedient to be interested in individuals and to take your time. In return, you can expect everyone to be willing to learn and demand performance. We are also in the fortunate position that we live in a stable country and that our university supports international exchange.

# Can Research Collaborations Help Mitigate Brain Drain and Catalyze/ Stimulate Peace? Examples from Africa

## Introduction

International migration has grown significantly since the early 1990s and has become an integral aspect of globalization (Gnimassoun and Anyanwu, 2019). General migration trends in Africa also reflect increase in mobility. According to the United Nations Department of Economic and Social Affairs (UNDESA, 2021), the total number of African migrants rose from approximately 22 million in 2000 to over 40 million in 2020, encompassing both intra-African migration and movement to industrialized regions such as Europe, North America, Australia, and parts of Asia. Further reports by UNDESA (2020) and the International Organization for Migration (IOM, 2022) indicate that in 2020 African emigrants were primarily concentrated in Europe (13.5 million), North America (6.7 million), Asia (3.3 million), and Oceania (1.4 million), highlighting the global dispersion of African migrants. The major factors driving migration in Africa include low wages, unemployment, political instability, and corruption (Aliyu & Lawal, 2024).

Brain drain is the form of migration that has experienced the greatest growth in its share over the past two decades (Metin, 2023). Large numbers of highly trained professionals, researchers, academics, doctors, engineers, and scientists leave their home countries in search of better working conditions, security, and opportunities abroad. The emigration of skilled professionals from Africa has been a longstanding concern for policymakers and scholars. Since the postindependence period, African countries have invested heavily in human capital development, only to see a substantial proportion of trained professionals relocate to Europe, North America, and other regions (Docquier & Rapoport, 2012). This phenom-

enon has been associated with weakened research systems, reduced innovation, and diminished state capacity.

According to the UNDESA (2020), Africa has seen a marked rise in the migration of skilled workers over the past four decades. For example, over 20,000 African professionals depart the continent each year, a pattern that continues despite policies aimed at retaining and attracting skilled labor (World Bank, 2018). Similarly, a study conducted by Usman et al. (2022) showed that in sub-Saharan Africa (SSA), the rate of skilled labor emigration has increased steadily, from 52.2% to 62.8% for four consecutive decades from 1990 to 2020, making it the second most affected region in the world (Table 1). This outflow is driven by political instability, reflected in factors such as civil conflicts, ethnic tensions, and terrorist activities (Christensen et al., 2018).

This review article explores what brain drain is and its consequences, strategies to mitigate brain drain, and the role of research collaborations for peacebuilding in Africa.

*Table 1*

*A Summary Showing the Trend of Skilled Migration from Africa to Industrialized Regions Such as Europe, North America, Australia, and Parts of Asia (1990–2020)*

(In Thousands)	1990–1999	2000–2009	2010–2018	2019–2020
<b>Northern Africa</b>	264.4	643.8	1072.4	1382.1
	35.8%	41.4%	36.9%	37.4%
<b>Sub-Saharan Africa</b>	486.3	895.8	1879.9	2300.3
	52.2%	57.4%	60.4%	62.8%
<b>Western Africa</b>	154.7	298.4	706.3	825.7
	20.8%	19.4%	21.8%	23.8%
<b>Southern Africa</b>	80.2	150.7	297.8	352.9
	11.9%	9.6%	10.4%	10.8%
<b>Eastern Africa</b>	300.5	326.9	604.1	756.5
	30.3%	20.2%	20.7%	22.1%
<b>Middle Africa</b>	53.2	142.1	243.8	289.4
	7.2%	8.4%	8.1%	8.3%

*Source: Adapted from Usman et al., 2022*

# Understanding the Concept of Brain Drain

What is brain drain, and why does it happen? The definition in the *ERIC Thesaurus* (n.d) is the “Loss of highly skilled or educated persons from one country, region, institution, or job sector to another (for better pay, improved living conditions, expanded opportunities, etc.)” Brain drain at the international level is shaped by numerous local and global factors (Kaukab, 2025). While brain drain is not exclusive to Africa and has affected many regions worldwide over time, the situation in Africa is especially troubling because of the magnitude of outmigration and the limited ability of many countries to replace the talent they lose (Edino et al., 2025).

Brain drain in Africa is influenced by a mix of push and pull factors. Push factors include inadequate research funding, poor infrastructure, unemployment, low wages, political instability, limited academic freedom, and pervasive corruption (Aliyu & Lawal, 2024; Bhargava et al., 2011; Haruna et al., 2014). Pull factors, by contrast, consist of the attractions provided by developed countries, such as higher pay, well-resourced work settings, professional recognition, and improved living standards (Dodani & LaPorte, 2005). For instance, the United Kingdom’s National Health Service (NHS) actively recruits healthcare workers from African countries with critical shortages, thereby intensifying the problem (Kirkland et al., 2022).

The literature on brain drain in Africa confirms that economic, political, and institutional factors continue to fuel the migration of skilled professionals (Docquier & Rapoport, 2012). Economic inequalities, especially low wages and limited opportunities for career advancement, push professionals to seek work in more developed economies where they can attain greater financial security and professional growth. This trend is further intensified by political instability, poor governance, and insufficient public sector investment, all of which create conditions that discourage skilled individuals from remaining and contributing to their home countries (Edino et al., 2025).

## Profound Consequences of Brain Drain in Africa

The consequences of brain drain for Africa are far-reaching. At the macroeconomic level, human capital depletion hinders industrial growth, reduces innovation, and limits the continent’s capacity to compete in a globalized economy (Giannoccolo, 2009). Loss of educated people generates a decrease in the intellectual capital of the country of origin, but

at the same time a rise in political instability and the level of fragmentation within the country (Docquier et al., 2007). Docquier et al. (2007) add that low economic development exacerbates grievances and conflict. This creates a vicious cycle: conflict fuels brain drain, and brain drain in turn weakens peacebuilding capacity.

It is evident that the economic impact of brain drain remains substantial, as financial losses and workforce shortages continue to affect key sectors, especially healthcare, education, and technology. The emigration of medical professionals has created severe shortages of doctors, nurses, and specialists, undermining healthcare systems in many African countries and hindering progress toward universal health coverage. Likewise, the education sector has been weakened by the loss of experienced lecturers and researchers, leading to declines in the quality of higher education and scientific innovation (Edino et al., 2025). Despite governments' efforts to invest substantial resources in education and professional training, highly skilled individuals continue to emigrate. As a result, the benefits of these investments are transferred to host countries, creating an economic loss for the home country (World Bank, 2021).

In the healthcare sector, for instance, the emigration of doctors and nurses worsens mortality rates, particularly in rural areas where access to medical services is already limited (Mills et al., 2011). The World Health Organization (WHO, 2023) estimates that over 135,000 African-trained physicians and more than 40,000 nurses are currently employed mainly in the United Kingdom, Canada, and the United States. This situation has created a severe shortage of medical professionals across many African countries, further straining already fragile healthcare systems (Chen et al., 2019; Adeyemi et al., 2018). Countries such as Malawi and Zimbabwe have less than two doctors per 10,000 people, resulting in overstretched healthcare systems and increased mortality rates (Mills et al., 2011). Similarly, Nigeria, Ghana, and South Africa have faced especially severe losses: Nigeria lost more than 9,000 doctors between 2016 and 2021, Ghana saw about 20% of its health workforce leave between 2015 and 2020, and South Africa experiences the emigration of an estimated 3,000 healthcare professionals each year (WHO, 2023). As a result, 40 of Africa's 55 countries are experiencing critical shortages of healthcare professionals. The COVID-19 pandemic further highlighted the fragility of African healthcare systems, as many countries were unable to deliver adequate medical care because of insufficient numbers of trained personnel (Chen et al., 2019).

The education sector is also adversely affected by brain drain, as leading university lecturers and researchers migrate to better-funded institutions abroad (Tebeje, 2005). This situation perpetuates a cycle of underdevel-

opment, as the departure of highly skilled individuals reduces the capacity to train and mentor future generations of professionals. For example, Nigeria lost an estimated 1,500 university lecturers to foreign institutions between 2015 and 2020 while South Africa recorded a 12% decline in faculty retention from 2018 to 2022 (UNESCO, 2022). Kenya likewise faces a serious academic staffing gap, with a shortage of more than 5,000 university lecturers (World Bank, 2022). The emigration of university professors and researchers has undermined teaching quality, weakened research capacity, and contributed to declining academic standards and knowledge production across the continent (Tebeje, 2005). Consequently, many African universities struggle to retain their most talented and high-performing academic staff, limiting their ability to support national development efforts (Gibson & McKenzie, 2012). Evidence further suggests that it is not average teachers, doctors, or scientists who leave, but predominantly the most highly skilled and productive individuals (Edino et. al., 2025).

Recent studies indicate that the loss of skilled workers deepens Africa's structural challenges, particularly in sectors that depend on advanced expertise to drive development (Lamidi & Attah, 2025). Similarly, UNESCO (2021) estimates that around 10,000 engineers migrate from Africa each year in search of better professional opportunities (Muhammed, 2025).

The economic implications of brain drain are substantial. Beyond the direct loss of skilled labor, African countries incur significant financial costs associated with training professionals who ultimately migrate. The International Monetary Fund (IMF, 2023) estimates that Africa loses over \$4 billion annually due to skilled migration. Additionally, replacing an African-trained doctor costs between \$21,000 and \$59,000 per individual (WHO, 2023), further straining national budgets and reducing overall economic productivity. Collectively, these factors underscore the profound developmental challenges posed by sustained brain drain in Africa.

## Potential Mitigation Strategies to Brain Drain

### Encourage Brain Circulation

Despite the negative impacts of brain drain, some scholars argue that it can have potential benefits if managed properly. The concept of “brain circulation” suggests that African professionals who migrate can later return to contribute to national development through knowledge transfer, investment, and mentorship programs (Docquier & Rapoport, 2012).

What is brain circulation? As Saxenian (2023) explains, brain circulation refers to “the dynamic and two-way movement of highly skilled and educated individuals across countries, in which professionals migrate abroad for education or employment and later return home or maintain strong professional, economic, and knowledge-based links with their country of origin.” The author further noted that, rather than involving one-way, permanent relocation, brain circulation highlights the ongoing transfer of skills, ideas, technology, and innovation across countries. For instance, Kessy & Shayo (2022) report that in recent years African professionals in the diaspora have begun to bring technology and skills back to home countries, transforming brain drain into “brain gain” through entrepreneurship and new enterprises. Figure 1 illustrates the outcomes of brain circulation and its impact on one country’s economic growth and reduction in migration.

## Research Collaboration as an Alternative to Permanent Emigration

Research collaborations are being recognized as a strategic mechanism that can address brain drain. One of the most direct ways research collaborations mitigate brain drain is by offering professionals the possibility of remaining intellectually and professionally connected without permanent migration. Joint research projects, co-supervised doctoral programs, visiting scholar arrangements, and virtual research platforms allow Afri-

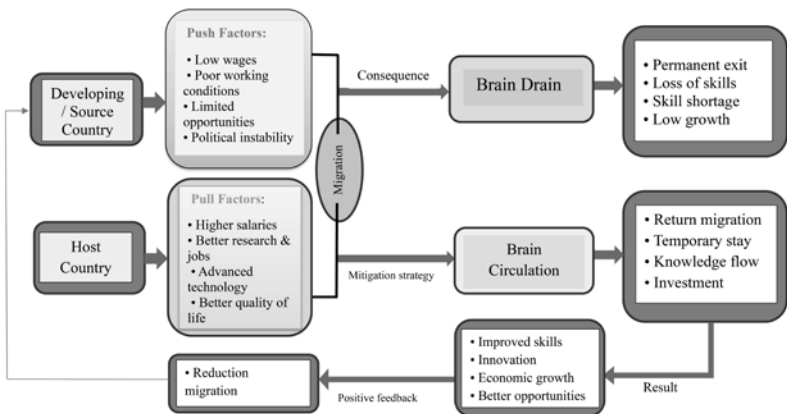


Figure 1  
Conceptual Framework: Brain Drain and Brain Circulation

can professionals to access global knowledge networks while remaining anchored to local institutions (“Leveraging brain circulation,” 2025).

For example, collaborative health research programs between African universities and European or North American institutions have enabled medical researchers to access funding, training, and advanced laboratories while continuing to work in their home countries. This model transforms migration from a one-way exit into a circular and flexible process, reducing the incentive for permanent departure (Botti et al., 2018).

In Austria, there are some initiatives and programs that are designed to mitigate brain drain in Africa by supporting skilled professionals and capacitating research and education facility in higher education institutions and research centers. For example, the Austrian-African Research Network Africa-UniNet, which was initiated by the Austrian Federal Ministry of Women’s Affairs, Science and Research (BMFWF) and launched by Austria’s Agency for Education and Internationalisation (OeAD) in collaboration with BOKU University, is one of them. The network aims to create a long-term and stable foundation for cooperation between Austrian and African universities and research institutions by promoting new academic contacts, strengthening scientific collaboration, and supporting innovative joint research projects. The ministry financially supports collaborative projects under the umbrella of the Africa-UniNet initiative. Through projects financed by the ministry, PhD students and postdoctoral researchers receive financial support for their stay in Austria and conduct research in Austria or their home country. This is a great move and benefits many skilled professionals from Africa, sustaining scientific dialogue, engaging with governmental and nongovernmental organizations, and providing expertise on higher education and research systems in both Austria and Africa.

Another initiative which supports collaboration between Austria and the Global South is Cooperation Development Research (KoEF) funding. This is also initiated by the BMFWF and has been implemented in similar modes of modality and aim as Africa-UniNet but includes other least developing countries of the Global South.

The Austrian Partnership Programme in Higher Education and Research for Development (APPEAR) is one of the successful programs that has greatly contributed to mitigating brain drain in some parts of Africa. It does so by financing academic partnership projects focused on research and capacity building, and by providing scholarships for student exchanges as well as for master’s and doctoral students. APPEAR aims to strengthen higher education institutions and research capacities in developing countries through long-term, equitable academic partnerships with

Austrian universities and research institutions. The program is grounded in the understanding that higher education and research are key drivers of sustainable development, poverty reduction, innovation, and good governance.

Four African countries are priority regions in which APPEAR supports joint research projects, academic training, curriculum development, and institutional capacity building. Projects funded under APPEAR are demand driven and based on shared academic interests, ensuring relevance to local development challenges while maintaining high scientific standards. The program encourages mobility of students and researchers, joint supervision of graduate students, and the strengthening of institutional structures in partner universities. Since the program's inception in 2009, APPEAR has supported at least 189 scholarship holders from partner countries of the Austrian Development Cooperation for master's and PhD studies in Austria (Hilmar, 2021). At least 50% of the beneficiaries of the scholarship are from Africa. In addition, the program has funded more than 140 academic partnership projects between Austrian and partner institutions ("Progress reports," n.d.).

Through these activities, APPEAR contributes to reducing brain drain and instead promotes brain circulation, enabling researchers to gain international experience while remaining connected to and strengthening their home institutions. Overall, APPEAR plays a vital role in enhancing the quality, relevance, and internationalization of higher education and research, while aligning academic cooperation with Austria's broader development policy objectives and the United Nations Sustainable Development Goals (SDGs).

## Diaspora Engagement through Structured Research Partnerships

Research collaboration, understood as structured cooperation among universities, research institutes, governments, civil society, and the private sector across borders, has the potential to retain talent, reconnect diasporas, and create shared platforms for dialogue. In the African context, such collaborations can mitigate brain drain by creating meaningful professional opportunities, knowledge exchange, investment, and other forms of collaboration that connect the diaspora communities with homeland universities (Tebeje, 2005; UNGA, 2025).

African diasporas represent a vast reservoir of expertise, networks, and resources. Research collaborations provide an institutionalized way

to engage diaspora professionals in national development. Diaspora-led research chairs, joint laboratories, and coauthored publications strengthen home institutions while rebuilding trust between expatriate professionals and domestic systems (Tebeje, 2005). Ethiopia, for instance, has benefited from diaspora engagement in higher education and health research, where expatriate academics collaborate with local universities on curriculum development, joint research, and mentoring (Yesigat et al., 2024).

### *Witnessing the Benefits of Expatriate Academic Collaboration in Ethiopia*

*I myself stand as both a witness and an active contributor to the ways in which Ethiopia is benefiting from expatriate academics who collaborate closely with local universities in curriculum development, joint research, capacity building, and academic mentoring, and my own academic and professional trajectory clearly illustrates the depth and continuity of this impact. As a scholar who benefited from an APPEAR doctoral scholarship, I experienced firsthand how structured international collaboration can transform individual scholars while simultaneously strengthening institutional systems within Ethiopian higher education. Through APPEAR, I received doctoral training under the guidance of BOKU University Vienna whose engagement with Ethiopia was grounded in long-term partnership, mutual learning, and institutional development. This exposure reshaped my research capacity, methodological rigor, and academic confidence, enabling me to align global academic standards with locally grounded research questions relevant to Ethiopia's development priorities.*

*As a scholar, alumni, and project partner, I witnessed how expatriate academics, working collaboratively with Ethiopian universities and research institution contributed meaningfully to curriculum development by revising and modernizing programs, introducing research-led teaching approaches, and embedding interdisciplinary and competency-based frameworks that better prepare students for both academic and societal challenges. Beyond curriculum reform, joint research emerged as a central pillar of collaboration, where expatriate and local academics codeveloped research agendas, jointly supervised graduate students, accessed international funding mechanisms, and coauthored publication in high-impact journals, thereby*

*elevating the visibility and credibility of Ethiopian scholarship within global academic networks. My doctoral research was deeply strengthened through this collaborative environment, benefiting from close mentorship in research design, data analysis, academic writing, and publication ethics, while remaining firmly anchored in Ethiopian realities. Importantly, the impact of this experience did not end with my doctoral graduation; rather, it positioned me to actively contribute back to Ethiopia's higher education and research landscape.*

*Currently, I am directly involved in securing funding and implementing five collaborative projects connected with Ethiopia, each designed to extend and multiply the benefits of expatriate academic engagement. The projects in which I am involved are namely HIGH FIVE, STRENGTH, COPE, REVITAL MU-ADU, and Re-BUILD, and all are financed by the government of Austria. Through these projects, we conduct joint research with Ethiopian universities and research institutions, financially support short-term research stays for academic staff and student exchanges, and provide scholarships at the master's, PhD, and postdoctoral levels, thereby creating structured pathways for academic mobility, skills transfer, and long-term capacity building. These initiatives also place strong emphasis on co-publications, curriculum development, co-supervision, and mentoring, ensuring that knowledge exchange is institutionalized rather than dependent on individual relationships. I work closely with colleagues from Nord University, Norway, and Imperial College London, United Kingdom. I place a strong emphasis on gender inclusiveness by offering better scholarship opportunities and empowering women in higher education and research institutions. In my role, I witness how Ethiopian scholars gain access to international research infrastructures, methodological training, and scholarly networks, while international partners gain deeper contextual understanding and locally grounded insights, resulting in truly reciprocal collaboration.*

*Capacity building remains a core outcome of these engagements, as Ethiopian universities strengthen graduate programs, research cultures, supervision practices, and academic leadership through sustained partnerships rather than fragmented interventions. Mentoring, which played a decisive role in my own academic formation, continues to be a central component of my current work, as I support early-career researchers and graduate students in developing research proposals, publishing their work, and navigating international academic spaces while maintaining strong commitments to their home institutions.*

*These experiences reaffirm my conviction that expatriate academics can serve as bridges rather than replacements, facilitating brain circulation instead of brain drain by channeling resources, opportunities, and expertise back into Ethiopian higher education and research institutions. My journey from APPEAR doctoral scholar to externally funded project leader demonstrates how strategic investment in individuals, when embedded within institutional partnerships, yields long-term returns for national capacity development. I therefore offer my experience as concrete evidence that Ethiopia benefits significantly when expatriate academics collaborate with local universities through joint research, scholarships, curriculum development, and mentoring, creating a sustainable ecosystem in which globally trained yet locally committed scholars contribute to the strengthening, internationalization, and resilience of Ethiopian higher education and research institutions.*



*Figure 2*  
*Priv.-Doz. Hans Sanden and I working in strengthening Collaboration between BOKU University and Ethiopian Higher Education Institutions*

*Note: Photo credit © Angelika Gärner*

## Building Research Ecosystems That Retain Talent

Beyond individual projects, sustained research collaboration contributes to the development of national and regional research ecosystems. These ecosystems include funding mechanisms, peer networks, ethical review systems, and innovation hubs that make research careers viable and attractive. When professionals see clear pathways for career growth at home, the pressure to migrate permanently is reduced (African Union Commission, 2024).

Rwanda's investment in research partnerships in health information and communications technology (ICT) and environmental sciences illustrates this dynamic. Through collaboration with international universities and donors, Rwanda has strengthened local research institutions, created graduate training opportunities, and positioned research as a pillar of national reconstruction. These efforts have contributed to both talent retention and social stability (Government of Rwanda, 2017).

## Designing Better Policy Frameworks and Strategies

Designing proper and problem-solving policy frameworks and strategies are very crucial to mitigating brain drain in Africa. To realize this, African governments, donors, and research institutions should invest in long-term, locally led research partnerships. Strengthening domestic research capacity through sustained funding, infrastructure development, and institutional autonomy enhances the professional prospects of local academics and reduces incentives to migrate (UNESCO, 2021). The regional research networks and centers of excellence should be also supported. Regional collaboration enables resource pooling, fosters South-South cooperation, and creates competitive research ecosystems capable of retaining high-level expertise. Centers of excellence can serve as hubs for innovation, postgraduate training, and interdisciplinary research, reducing the need for outward migration while enhancing continental capacity (Teferra, 2014).

At the same time, governments should promote diaspora engagement and circular mobility through targeted incentives. Professionals in the African diaspora constitute a vital source of skills, networks, and resources. Measures such as tax benefits, joint academic or professional appointments, visiting scholar initiatives, and flexible return arrangements can enable knowledge exchange without necessitating permanent repatriation. By supporting circular mobility, expertise can flow between

Africa and the Global North, helping to convert brain drain into brain circulation and ultimately brain gain (Docquier & Rapoport, 2012; World Bank, 2018).

## Research Collaboration as a Peacebuilding Process

African diasporas represent a vast reservoir of expertise, networks, and resources. Research collaborations provide an institutionalized way to engage diaspora professionals in national development and peacebuilding without requiring immediate permanent return (Tebeje, 2005). Research collaboration is not only a technical activity; it is also a social and political process. Joint research requires dialogue, trust, shared norms, and mutual accountability, qualities that are essential for peacebuilding. In divided or post-conflict societies, collaborative research platforms can bring together professionals from different ethnic, regional, or political backgrounds around common problems (Pherali, 2019).

In countries such as Ethiopia, Kenya, Nigeria, and Sudan, conflict-sensitive research initiatives in areas like natural resource management, climate adaptation, and pastoralism have created neutral spaces for dialogue. Researchers from conflicting communities collaborate on data collection and analysis, helping to depoliticize contentious issues and promote evidence-based solutions (Pohl et al., 2017). In my perspective, Ethiopia is one of the countries that benefited from partnerships between the diaspora and local universities in building peace by signaling institutional openness and reconciliation, especially in post-conflict contexts where trust has been eroded.

Both the research collaboration between the Global South and the Global North and cooperation among countries in the Global South strengthen peace by improving the quality of governance. Collaborative research generates credible evidence that informs public policy on sensitive issues such as land use, decentralization, migration, and service delivery. When policies are grounded in inclusive research processes, they are more likely to be perceived as legitimate and fair (Pohl et al., 2017; Sami, 2024).

The process of building peace can be achieved not only through collaboration between the Global South and the Global North, but also through cooperation among countries in the Global South. In this context, universities and research institutions should partner with industries, international organizations, and think tanks to promote innovation, strengthen national economic development, and support inclusive growth. By creat-

ing sustainable employment opportunities for skilled professionals, such collaborations can contribute meaningfully to long-term peacebuilding. For instance, in countries like Ghana and Kenya, partnerships between universities, think tanks, and government institutions have improved policy dialogue and reduced tensions around electoral reform, urban planning, and natural resource governance. Stronger policy environments in turn create better conditions for professionals to remain and contribute locally (Bedu-Addo et al., 2020).

Regional research networks play a critical role in linking brain drain mitigation with peacebuilding. Pan-African initiatives such as the African Research Universities Alliance (ARUA) and regional centers of excellence facilitate collaboration across borders, reduce isolation, and strengthen South–South cooperation (Cloete & Maassen, 2023). These networks function as forms of science diplomacy. Even when political relations are strained, research collaboration often continues, maintaining channels of communication and cooperation. In this sense, research networks contribute to regional stability and a shared African identity grounded in knowledge production (Rüland et al., 2023).

To illustrate the role of academic collaboration among higher education institutions in peacebuilding, the following case study from Ethiopia is presented.

#### *Case Study: The Amhara–Tigray Peace Forum, Ethiopia*

*North–South and South–South collaboration can make a meaningful contribution to peacebuilding by shaping ideas, institutions, and people in ways that address the root causes of conflict and promote long-term social cohesion. Its impact is both direct (through education and research) and indirect (through broader societal influence). Ethiopia is a multiethnic federal state whose political system has long been shaped by questions of identity, power sharing, and historical grievances. Among the most sensitive relationships in the country was that between the Amhara and Tigray communities, two groups with deep historical, political, and cultural interconnections. Despite shared histories, relations between the two have been marked by mistrust, disputes over identity and territory, competing political narratives, and increasing polarization in political discourse and media. The tension between the two regions escalated after 2018. Following this escalation, the roads connecting the Tigray region to the federal*

government were blocked. As a result, any form of land transportation to the Tigray region through the Amhara region became impossible.

To resolve the tension and bring long-lasting peace between the two regions, Mekelle University and Bahir Dar University in Ethiopia took the initiative to organize a peace forum. Despite widespread fear and frustration among the people of both regions, the Amhara–Tigray Peace Forum was held at Mekelle University on December 14, 2018. The forum represented an important academic initiative aimed at promoting dialogue, reconciliation, and peaceful coexistence. The two universities drew on their long-term South–South collaboration and institutional partnership to convene the forum. This initiative constituted an early peacebuilding effort during Ethiopia’s political transition period. Universities, as spaces for intellectual exchange and relatively neutral dialogue, emerged as potential platforms for peacebuilding. Mekelle University, located in the Tigray region, hosted the forum as part of this broader effort to encourage dialogue beyond formal political negotiations. The forum had the following interrelated objectives:

- ✓ *Promote dialogue and mutual understanding: The forum aimed to bring together scholars, elders, community representatives, and youth from both communities to openly discuss contentious issues in a respectful environment.*
- ✓ *Address historical grievances peacefully rather than denying or politicizing grievances: The forum encouraged participants to acknowledge historical experiences and explore nonviolent ways of addressing them.*
- ✓ *Reduce mistrust and polarization: By creating face-to-face interaction, the forum sought to counter stereotypes, misinformation, and hostile narratives circulating in political and social spaces.*
- ✓ *Strengthen the role of academic institutions in peacebuilding:*
- ✓ *The forum highlighted universities as critical actors in conflict prevention, research-based dialogue, and civic engagement.*

The forum was participatory in nature. It brought together a diverse group of participants, including university scholars and researchers, community elders and opinion leaders, youth representatives, civil society actors, and local intellectuals and professionals. Discussions were organized around panel presentations, moderated dialogues, and open forums, allowing participants to share perspectives and engage in constructive debate. Emphasis was placed on respectful

*communication, evidence-based discussion, and listening to opposing viewpoints. The discussions highlighted the need to balance ethnic self-rule with national cohesion. Strong emphasis was also placed on the responsibility of educated elites and young people to reject hate speech, promote tolerance, and contribute positively to intercommunal relations.*

*While the Forum did not produce binding political agreements, it had several important outcomes:*

- Creation of dialogue space: It demonstrated that peaceful discussion between Amhara and Tigray representatives was possible despite deep tensions.*
- Norm setting: The forum promoted dialogue, tolerance, and constitutionalism as legitimate approaches to conflict resolution.*
- Symbolic importance: Holding the forum at Mekelle University carried symbolic value, signaling openness to engagement across regional and political divides.*
- Foundation for future initiatives: Participants called for continued dialogue, joint research, and people-to-people engagement beyond the conference.*

*Generally, the Amhara–Tigray Peace Forum stands as an important example of preventive peacebuilding and academic diplomacy in Ethiopia’s recent history. It reflected an early attempt to address rising intercommunal tensions through dialogue rather than confrontation. Although subsequent political developments showed the limits of such initiatives, the forum remains significant as a reminder of the potential role of universities, intellectuals, and civil society in fostering understanding and peaceful coexistence. Both universities continued to implement various joint projects despite the armed conflict between the Tigray region and the federal government from 2020 to 2022. The partnership and collaboration between Bahir Dar and Mekelle universities extended beyond academics into societal engagement. By leveraging their collaboration, the universities positioned themselves as peace actors using research, dialogue, and intellectual leadership to promote reconciliation and peaceful coexistence between communities in the two regions (“Amhara-Tigray Peace Conference,” 2018).*

## Summary

Research collaborations represent a promising yet underutilized approach to addressing Africa's brain drain while also contributing indirectly to peacebuilding efforts. Although research collaboration cannot replace the need for comprehensive political and economic reforms, it plays a critical role in strengthening knowledge institutions that support long-term stability. By promoting brain circulation, expanding professional opportunities, reconnecting diaspora communities, reinforcing institutional capacity, and encouraging dialogue across social and geographic divides, collaborative research initiatives reposition knowledge production as an instrument for development, social cohesion, and post-conflict recovery. Future policy efforts should therefore prioritize African-led, equitable, and sustainable research partnerships that are explicitly aligned with peacebuilding and development objectives.

In general, rather than viewing skilled professionals' migration solely as a loss, collaborative research reframes mobility as a shared asset. When embedded in inclusive, conflict-sensitive frameworks, research collaborations can help African societies retain talent, rebuild trust, and move toward sustainable peace and development.

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# Building Capacity for Sustainable Rural Tourism in Mozambique through a North–South (or South–North?) Collaboration: Lessons from CAST Mozambique

CAST Mozambique (Capacity Building for Sustainable Rural Tourism in Mozambique) is a higher education cooperation initiative funded by the Austrian Development Cooperation and implemented through the Austrian Agency for Education and Internationalisation (OeAD). It represents a partnership between IMC University of Applied Sciences Krems from Austria and Universidade Eduardo Mondlane (UEM) from Mozambique, aimed at strengthening institutional capacities in sustainable tourism education and research and fostering community engagement.

The project originates from the observation that the development of tourism in Mozambique remains strongly concentrated on “sun, sea, and sand” destinations along the coast, while rural areas still receive less attention despite their tourism potential. The sector continues to face structural weaknesses, including limited infrastructure and relatively low visitor numbers, thus constraining its contribution to wider socioeconomic development. Although Mozambique possesses considerable human capital, the tourism and hospitality workforce is marked by a significant shortage of qualified staff. Moreover, there still is a limited understanding of sustainable – particularly rural – tourism within the country. This gap can be traced to the scarcity of specialized academic programs in this field, especially at the master’s level, as well as the insufficient integration of sustainability-oriented tourism education within existing bachelor’s curricula.

As a result of those challenges, CAST Mozambique seeks to develop the first master’s curriculum in sustainable tourism in the country, one that is contextually grounded in Mozambique’s rural development chal-

lenges and opportunities. This goes along with the creation of practice-oriented teaching modules, the enhancement of pedagogical and administrative competencies of staff at Inhambane Higher School of Hospitality and Tourism (ESHTI), and the strengthening of linkages between academia and communities in Mozambique's countryside. By utilizing sustainability principles, participatory approaches, and tourism knowledge, CAST Mozambique aspires to contribute to more equitable and resilient rural development pathways. The project thus positions higher education as a key in shaping sustainable tourism and in fostering local capacities for socioeconomic transformation.

The project team is made up of two universities based in very different geographical contexts of the world, i.e., Europe (Austria) and Africa (Mozambique). Collaborative work between the Austrian and Mozambican project teams has been characterized by an interplay of diverse disciplinary backgrounds, institutional cultures, and professional practices. These differences have been both a source of learning and, at the same time, a source of complexity in the day-to-day operation of the project. Navigating diverse academic traditions, expectations, and working styles requires ongoing negotiation, reflection, and adaptation to ensure that the project keeps on track. Yet it is precisely this complexity that has enabled the project to generate more nuanced perspectives on sustainable rural tourism and to coproduce project results that neither team could have developed on its own.

This chapter reflects on these challenges as well as benefits that have emerged from the cooperation as part of CAST Mozambique. It offers an honest, reflective account by four of the project members, one being the project lead from Austria, and three members of the Mozambican team. This chapter deliberately puts emphasis on the perspectives of Mozambican partners, recognizing the need to strengthen the visibility of locally grounded expertise in global discussions on sustainable tourism, thus also contributing to a stronger representation of African scholars in published reflections on international cooperation.

Engaging in a reflective manner about research or project success (and, most importantly, failures) is an essential yet often underrepresented dimension of academic practice. Honest accounts of collaboration and the dynamics that shape research and capacity-building projects offer insights that are rarely visible in academia or in the more formal project outputs. Such reflections offer insight into the complexities and contingencies inherent in international and interdisciplinary work, while also creating a space for learning, mutual understanding, and more equitable forms of knowledge production. By critically examining both challenges and suc-

cesses, we can start admitting mistakes or failures, move beyond idealized narratives and foster a more transparent, reflexive, and ultimately more open project and research culture that will serve development projects and their success in the future.

## Claudia Dolezal – IMC University of Applied Sciences

There are two aspects that I want to reflect upon, which, in a way, do go hand in hand. One focuses on the limbo between working online and offline and in how far it matters for project success, and the other aspect focuses on project ownership within the team.

Over the years of the project, the team relied heavily on online meetings to coordinate activities, exchange ideas, and maintain momentum at times where it was sometimes difficult to do so. These virtual interactions were undoubtedly useful and certainly indispensable, particularly given the geographical distance between the team members. The COVID pandemic, after all, has taught us that much (or most?) can be achieved online. Yet in reflecting on this time and my experiences as an academic, it became increasingly clear to me over the years how limiting digital communication can be for building genuine collaborative relationships. Technical issues such as unstable internet connections, cameras being switched off, or delays in audio and video transmission often disrupt the flow of conversation and make it difficult to establish a real understanding. These, however, are part of the realities of working halfway across of the globe and these challenges became even stronger due to the staff fluctuations in the project. While we had a very stable core, some project members came and left again, being replaced by new members. When people have not yet met in person and new colleagues join regularly, it is difficult to cultivate interpersonal relationships and trust, which, however, an effective collaboration needs to grow.

This contrast between working online and offline became especially evident during the visits in Austria and in Mozambique. Being physically present in the same room created such a different form of interaction – one that allowed for spontaneous discussion, shared problemsolving, and mutual understanding of one's visions and values. I remember quite early in the project when I visited the partners in Mozambique for the first time during the preparatory funding, and quickly realized that we shared not just the same view on tourism and participation, but that we also had similar values regarding tourism, education, and life more broadly. I had

the feeling that this made us feel closer, especially when we were physically distanced most of the time. Equally important was the opportunity to experience each other's institutional and everyday realities – seeing where colleagues work, understanding the conditions under which they teach and conduct research, and gaining insight into the broader social and organizational contexts that shape their professional lives. These encounters fostered a stronger sense of mutual understanding, empathy, and commitment to the project. For me, visiting Mozambique and hosting colleagues here in Austria were important moments in developing a deeper sense of project ownership and an even greater appreciation of the collaboration.

This leads me directly to the second aspect that I would like to reflect upon, which is project ownership. From the outset, I have felt a strong sense of personal ownership over the project. Having been the one who initiated the collaboration between IMC and UEM, reached out to partners, and invested considerable time and energy long before any formal resources were available, the project has always felt, in many ways, like “my baby”. This sense of responsibility was shared by the core team members (Helsio and Daniel) who were involved from the beginning, and together we developed a clear commitment to the project's vision. As the official project lead, I oversaw, along with the Mozambican project lead Helsio, the progress, finances, and strategic direction, which naturally positioned me (/us) as the central point of coordination alongside Daniel, who was also part of the project from the very beginning. In retrospect, this central role sometimes made it difficult to delegate as much as I might have wished. When one is responsible for steering the overall direction, it can be challenging to step back and allow others to take full ownership of individual components.

At the same time, my reflections over the past years have shown that project ownership is not a homogeneous phenomenon across people (and cultures). People engage differently: some colleagues step forward readily, take initiative, and thrive when they are given responsibility; others need more guidance, encouragement, or structure before they feel confident enough to take the lead. These differences are not a matter of capability or motivation, but they reflect different working styles, levels of familiarity with international project environments, and cultural as well as institutional contexts. Recognizing and respecting this diversity has been an important part of my own learning process.

In a project that involves partners from such different institutional backgrounds and resource environments, fostering shared ownership becomes even more crucial. It is essential that all partners – not only

those initiating the project – feel that the work is genuinely “theirs,” that their expertise shapes the direction of activities, and that they have a certain amount of autonomy to contribute meaningfully. This is particularly important in collaborations where one side is positioned as the recipient of capacity-building support. Rather than reinforcing hierarchical dynamics, strong project ownership on all sides can help create a more balanced, reciprocal partnership in which knowledge flows in multiple directions.

Looking back, I continue to ask myself what truly fosters project ownership across a diverse team. Based on the experience I have made with CAST Mozambique, several elements stand out for me. First, a clear separation of tasks, with responsibilities allocated in ways that allow each person to “shine,” can significantly enhance both ownership and confidence. Second, creating space for independent action – while still offering support when this is required – helps team members feel part of something larger and impactful. Finally, structured coordination mechanisms, such as deadlines and regular meetings, can provide the clarity and accountability that enable people to step forward and take initiative. Time and again, I observed that when expectations were clearly articulated and colleagues were invited to present their contributions, they rose to the occasion.

These reflections do not offer definitive answers, but they highlight the ongoing, relational nature of project ownership. It is something that must be cultivated intentionally and revisited continuously as teams evolve and contexts shift. I have really enjoyed being part of this collaborative endeavor and witnessing how the project has grown through the contributions of so many committed colleagues. And if I were to claim that any project unfolds perfectly, I would be misleading both myself and the reader; honest reflection is essential if we want to understand how collaboration truly works and how it can be strengthened. I believe that reflecting particularly on those aspects that are challenging contributes a substantial amount to project success.

## Helsio Azevedo – UEM Universidade Eduardo Mondlane

CAST Mozambique is the result of an encounter between three academics working in different fields but connected by the global communication network, the internet. I mention this because it was through the internet that two ESHTI researchers were exposed to this opportunity as a result of their daily work and publications in major platforms for the dissemination of scientific production in general and tourism in particular. Expo-

sure here means that only by performing the role of teacher and researcher was it possible to join and establish national and international networks that enable projects such as this one to take place, which is a prestigious opportunity not everybody has. After receiving an email from Claudia, the project coordinator in Austria, about the intention to collaborate with ESHTI, we promptly scheduled a virtual meeting that brought us together in an unprecedented way. More than just presenting our own work that we have been doing over the years, we listed the possibilities for cooperation. Those meetings, both online and in person, were unique opportunities that brought reflections and guided our thinking regarding the aims of the project. As coordinator of this project in Mozambique, I believe that its successful implementation is the result of this very resource, the internet and all the meetings and chats it allows us to have, which continues not only to bring us closer together but, most importantly, allows us to quickly hold meetings when the project requires it.

Although the internet serves as a means of connection between the teams in both countries, one of the challenges that remains is the language of communication and work, especially for administrative coordination, since the official language in Mozambique is Portuguese and in Austria it is (Austrian) German, with a high level of proficiency in English, which is the language of the project. Unfortunately, some members of the Mozambican team still have low levels of English comprehension and writing skills, which sometimes limits the possibility of transmitting/assimilating relevant ideas and information, especially in progress meetings. Free online translators have been the solution to overcome this situation, again a mundane tool that has, however, really changed the way we are interacting with one another as part of this project. Each member of the Mozambican project team constantly needs to take advantage of training opportunities in the English language to improve their skills and, therefore, their opportunities for involvement in international projects like CAST Mozambique. Learning English is one of the key assets that enables one to gain access to these international possibilities.

Another challenging issue has been the management of audit processes which require the involvement of external companies. While the audit budget for the project was decided by the team, mistakes can happen. In our case, it turned out that the budget was below the rates that were requested by companies in Mozambique, considering that they must travel to Inhambane where ESHTI is located. Inhambane, however, is almost 500 km from Maputo, the capital where most certified and reputable companies are based. The problem was easy to solve with the help of minor budget shifts; however, it did show us that sometimes the reality

of how things work is different to what we imagine. In addition, contract negotiations, as required by Mozambican procurement legislation, sometimes caused delays in the submission of the report. On top of that, the requirements by APPEAR in terms of the layout and content is something that the audit companies in Mozambique are not used to, which caused additional issues and delays. Despite these constraints, the audits have always been completed successfully. Rather, this aspect is a substantial learning experience for us in doing this and future projects, as this process results in useful recommendations to ensure compliance with the Austrian and Mozambican legislation.

Another learning experience that deserves mentioning, which we found quite innovative and which will be replicated in the future, is the use of timesheets, which encourage project members to plan and record their specific contribution to the project and the dates and time when they did this. This tool recognizes the value of the work done and will definitely be adopted in future projects as it enhances keeping track of people's contributions and makes it easier to allocate this to work packages. It should be noted that, although ESHTI has experience in implementing projects from other funding agencies, this tool was not previously used. During a training session as part of our visit in Austria, we learned more about these project management tools and found this extremely useful.

Of course, when one engages in an international project of this size, there are many challenges and lessons learned along the way. However, it is important to say that, as project manager in Mozambique, it is motivating to see the progress that is being made, even if this may not always be as planned. Projects are like people's lives: even when well planned, they are not carried out with millimetric precision; they often depend on various external factors that either help or hinder their implementation. Persistent internal communication (with team members) and external communication (with national/international partner institutions, suppliers, and others) is always the way forward to ensure that goals are achieved. It is important to keep agile and flexible and make adaptations along the way to succeed with a project of this kind.

## Daniel Zacarias – UEM Universidade Eduardo Mondlane

Being involved in the implementation of CAST Mozambique has been both rewarding and, at times, unexpectedly demanding. Entering the field with a strong sense to support rural communities in developing tourism in

a more sustainable, inclusive, and locally grounded way, I was motivated by the belief that knowledge sharing and skills development could make a tangible difference in people's lives. In many respects, this belief has been reinforced by the openness, curiosity, and commitment shown by local participants and the team, whose engagement has been one of the most encouraging aspects of the project so far. At the same time, the experience has been marked by challenges that were not always anticipated in the planning phase. One of the most significant has been the weight of bureaucracy. Administrative procedures, approvals, reporting requirements, and coordination with multiple institutions have often been slow and complex. This has sometimes created a disconnect between the pace at which communities are ready to engage and the pace at which the project is formally allowed to move forward. As a result, energy and momentum in the field was sometimes difficult to sustain, and considerable time and effort was diverted from substantive work toward navigating administrative processes.

Another sensitive but unavoidable dimension has been political influence in the implementation process, a typical characteristic of Mozambique. While engagement with local authorities is essential and often constructive, there have been moments when political interests and expectations of visibility shaped decisions in ways that did not always align with the project's original intentions. Learning to work within this reality has required careful negotiation, diplomacy, and constant attention to maintaining the project's integrity, neutrality, and community-centered focus. These experiences have led to a deeper understanding that implementing development-oriented projects in Mozambique is not just a technical or managerial exercise but also a social and political one. Success depends not only on good design and resources but also on relationships, trust, timing, and the ability to adapt. While the frustrations are real, they have also been instructive. They have forced the team to reflect on the assumptions, refine strategies, and become more attentive to context, power dynamics, and institutional realities.

Ultimately, this process has strengthened my appreciation of the complexity of sustainable development work. It has reminded me that progress is rarely linear and that meaningful change often happens slowly, through negotiation, learning, and persistence. Despite the obstacles, the continued engagement of communities and the visible but small shifts in awareness and capacity provide a strong motivation to continue, adapt, and improve, and to see the challenges not only as constraints, but as part of the learning journey toward more effective and grounded practice.

## Sonia Cossa – UEM Universidade Eduardo Mondlane

As part of the activities planned for 2025, CAST Mozambique conducted a field visit to the district of Zavala between October 19 and 22. This activity was part of the first phase of field activities with students, involving two project members, three ESHTI lecturers and 24 third-year students from the Tourist Information and Tourist Market Management courses in the subjects of rural tourism and tourist itineraries.

The experience of planning the fieldwork with the students was very positive, characterized by a mixture of emotions and a great deal of learning. The organization and coordination of the activity stood out, characterized by a clear division of the activities to be carried out before, during, and after the field activity, including the creation of sessions with students before the field trip to give instructions for the activity, the creation of small groups of students assigned to a teacher to allow better monitoring of the activities and ensure compliance with the rules, and the involvement of groups representing the local community in the entire field trip planning process. These actions allowed the activity to take place in a peaceful environment where each member was clear about their role in the whole process. What already became clear from this collaborative approach is that communities need to be involved early in the planning and are a crucial voice for the success of a field trip.

Apart from the positive aspects mentioned above, I also encountered challenges. Logistics and resource management, time management, accommodation management, and administrative process management were major challenges that required careful planning. The group consisted of 30 participants, including teachers of the subjects involved, project members, students, and a driver. The district did not have accommodation units that could, on the one hand, accommodate the entire group in a single space or in accommodation units close to each other or, on the other hand, allow the mobility necessary for carrying out the activities. This limitation led to the need to identify a location where the entire group could be accommodated in a camp, which required a profound change in the entire planning process previously designed to ensure the necessary logistics for this type of experience (creation of space for food preparation, bathrooms, acquisition of materials, and equipment necessary for camping, such as tents, amongst others). This unexpected shift to camping became a powerful reminder that flexibility and creativity are essential skills in tourism planning as much as in project planning. As a project team, we had to recalculate the expenses and ask for a small budget shift from APPEAR, which – luckily – was not a problem.

Another challenge worth mentioning was communication with the students, which was somewhat complex. Some of them showed little involvement during the planning and execution of the field activity, resulting in poor performance in achieving the objectives and results of the activity. For me, this raised important questions about motivation and preparedness of students who are part of the trip: How can we better align student expectations with the realities of rural tourism work? One observation is that some students may regard fieldwork as a purely academic requirement rather than an opportunity for experiential and lifelong learning. This disconnect suggests that there is a need for clearer communication about the purpose and value of such activities, as well as pre-fieldwork sessions that emphasize the practical challenges that students will encounter.

Despite the challenges, planning fieldwork with students was a valuable experience. The difficulties encountered were a learning experience and need to be considered in future planning. Regarding students, it is necessary to identify a clear selection method that allows for the nomination of students who can truly seek to learn from the experience and bring the desired results to the activity. Ultimately, this experience reaffirmed that field trips are about technical skills as much as they are about cultivating resilience, adaptability, and a deeper understanding of the socio-spatial dynamics that shape rural tourism.

## Conclusions

This chapter offered a reflection on a collaborative effort between two very different cultural and geographical contexts. CAST Mozambique has illuminated the complexity of international collaboration for sustainable rural tourism development. What began as an effort to strengthen academic capacity and foster community engagement evolved into a rich learning journey characterized by constant negotiation, adaptation, and, at the same time, growth on both sides. The reflections shared in this chapter underscore that success in such partnerships is not defined only by outputs, but by the relationships, learnings, and shared ownership that is cultivated along the way.

Numerous challenges arise along the way when one engages in a project of this kind. Given the limited scope of this chapter, we have focused on those challenges that were most prevalent for us personally, ranging from linguistic and bureaucratic hurdles to the realities of working across diverse institutional and cultural contexts. Looking back, these were not

mere obstacles but opportunities for deeper understanding. (As is the opportunity to write a book chapter and invite team members to reflect and share with others!) The recent fieldwork experience with students in Zavala further reinforced this point and was an important lesson in terms of logistical constraints and the need for flexibility, helping us solve problems on the spot.

Due to the capacity-building nature of CAST Mozambique as a project, we would like to take a moment to reflect on this idea. Capacity building per se may be about the technical training (in this case, to teach sustainable tourism or codesign curricula); however, at the same time, it is as much about creating equitable spaces for dialogue and coproduction of knowledge and, most importantly, about strengthening soft skills. Those skills, be it English language proficiency, project administration, or working in an international team, are as beneficial as the technical training that the project got its funding for in the first place. Particularly, the use of online technologies to engage in virtual meetings and keep the momentum going has been a crucial gain of the project. At the same time, our reflection here has demonstrated the transformative potential of face-to-face encounters, not only for greater efficiency but also to be able to grasp the other teams' reality and establish mutual trust. Similarly, the field trip showed us that experiential learning does not come easily; rather, it requires careful preparation and clear communication of the aims to motivate students and see the trip as an opportunity for lifelong learning rather than as a mere academic requirement. Reflecting on this field trip adds an important pedagogical insight to the discussion on capacity building.

The very title of this chapter – North-South (or South-North?) – is also an invitation to question the power dynamics that often underpin international cooperation for development. While capacity building is frequently perceived and presented as a one-directional transfer of knowledge from “the North” to “the South,” our experience seeks to challenge this assumption. CAST Mozambique has shown that learning flows in multiple directions: Although the Mozambican side might be considered the primary focus of capacity-building efforts as part of this project, the Austrian team equally gained invaluable insights and built immense capacity. These include, e.g., context-sensitive approaches to project management, resilience in environments with limited resources, managing international teams, and the importance of flexibility in navigating bureaucratic and political realities. Reflecting on student engagement and the involvement of communities further taught us that not only universities and institutions are involved in knowledge production. Essentially, knowledge is cocreated in the field through dialogue between the actors, making expe-

rential learning an important aspect of capacity-building projects. These lessons are as critical for institutions in the North as they are for those in the South, reminding us that equitable partnerships require tolerance, reciprocity, and openness to transformation on all sides.

Ultimately, CAST Mozambique is a reminder that sustainable tourism development cannot be achieved through isolated efforts. It requires collaborative, reflexive, and context-sensitive approaches that embrace the complexity that some might regard as difficult. The reflection on student involvement specifically has taught us that capacity building is not just about institutional transformations but also the change of mindsets in the field, be it communities, students, or lecturers. By seeing these complexities as an opportunity and as the soil to grow something new, along with sharing these honest reflections, we hope to contribute to a more open and critical discourse on international cooperation for development – one that values learning as much as achievement and sees challenges not as setbacks, but as an important part to building stronger, more inclusive cooperations.

Ruth Kutalek, Esther Mukooza, Aloysious Nnyombi,  
Constantine Loum, David Kaawa-Mafigiri

# Challenges Revisited: Reflecting on Needs-Based Education and Research Programs

## Introduction

The APPEAR project, the MA-MEDANIH (Master of Arts Program in Medical Anthropology and International Health) initiated in 2014 at Gulu University, aimed to provide students with a postgraduate education that is both locally relevant and globally useful. Through impactful, needs-based research, we aimed to establish a multidisciplinary health science course that would enhance the capacity of local graduates and demonstrate how political, social, and cultural dimensions affect health. Our research endeavors employed medical anthropology theory and social science methodologies to provide a robust basis for understanding societal and health challenges in context. By fostering academic partnerships with several institutions through exchanging teaching staff, holding lectures, and supervising research, the program contributed to the development of a cohort of Ugandan medical anthropologists prepared to work in academia, policy, and practice. Specifically important was strengthening skills in social sciences to systematically analyze the causes of poverty and empower capacities in social science research.

Many of the trainees have applied anthropological approaches to research, nongovernmental organization programing, and public health institutions. This has extended the project's impact and strengthened locally grounded expertise in medical anthropology. The program was strategically located in northern Uganda, a region still recovering from one of the country's longest civil war. For more than two decades, the population of northern Uganda has experienced massive displacement, perpetual poverty and the closure of health services. Gulu is one of the four districts in northern Ugandan that was most badly affected by the conflict.

## Graduate Education

Constantine Loum, who successfully completed his PhD studies at the University of Vienna, initiated the project, which was directed by Grace Akello. The project supported the launch of the master's program, including administrative costs, tuition for students, and fees for national and international lecturers. Prior to the program's implementation, there were few medical anthropologists in Uganda; most of them were trained abroad and later located at Makerere University. The master's program in medical anthropology is located at Gulu University in Uganda, at the Faculty of Medicine, Department of Mental Health. It was designed for East African participants with a bachelor's degree in the humanities or health-related disciplines. Because the program is multidisciplinary, we targeted participants from recognized universities or those employed in the health sector, education, or national and international NGOs focusing on health and well-being.

Courses are taught by Gulu University teaching staff, as well as visiting lecturers and professors from Ugandan and international universities. The courses are handled flexibly, taking into consideration the wishes, aspirations, and needs of the participants as well as the academic staff. The two-year program blends theory and practice through an applied research methodology. As a pioneering course that addresses cross-cultural perspectives in healthcare, the program has attracted candidates from the health sciences and humanities.

The master's program takes a needs-based approach to training and draws from the context of local Ugandan communities. The program provides students with the knowledge and skills necessary for conducting research at the intersection of health and social sciences. For example, modules focus on armed conflict and its aftermath in relation to medicine, human rights, culture, and anthropology of health, disease, and illness. The course modules are taught through participatory, adult-centered learning methods. Student's life experiences, the contexts from which they come, and their needs form the core of the learning methodology. The program was designed to provide a robust research approach to address local challenges.

Core courses include Social and Cultural Anthropology, Medical Anthropology, Anthropology of Infectious Disease, Cross-Cultural Psychiatry, Anthropology of Health, Disease and Illness, Medicine, Human Rights and Culture, Children, Health and Illness, Health and Healthcare in Africa, and Research Methods and Dissertation/Thesis Writing. Elective courses include Epidemiology and Biostatistics, Gender and Repro-

ductive Health, Chronic Diseases in Africa, and Current Debates in Medical Anthropology.

The program has proven to be a very crucial avenue for focused research on the social, economic, cultural, and health challenges facing communities. It examines these issues from the local contexts and how communities perceive them (see table 1 for a list of master's topics).

*Table 1*

*Examples of Master's Theses in Medical Anthropology at Gulu University*

<b>Title</b>	<b>Author</b>
Looking after a child with cancer: A mother's pain in caring for a child with Burkitt lymphoma cancer at the children's cancer ward in Lacor Hospital, Gulu, Uganda	Leo Okoya
Rebuilding the shuttered self: Psychosocial well-being of the youth in the post-conflict northern Uganda	Elma Acayo
Assessment of the causes of alcoholism in war-ravaged Kitgum district, northern Uganda	Mike Otto
Utilization of family planning services among young women: Implications for child survival and development at Bar-Dege division, Gulu municipality	Gladys Jane Acan
Assessment of child-birth practices in Kabale district, southwestern Uganda	Elizabeth Kembabazi
Perceptions of HIV positive mothers on the role of reproductive health education on the performance of health service delivery at Gulu Hospital, northern Uganda	Francis Obutu
Community perceptions on safe male circumcision in Adjumani district, northern Uganda	Boniface Cale
Assessment of community perceptions on Tuberculosis: A case study of Kiryadongo sub-country, Kiryadongo district, Uganda	Immaculate Oryema
The social context of health and health care access: A challenge to universal health coverage in Budongo sub-county, Masindi district	Jimmy Obol Sunday
Assessment of child-birth practices in Kabale district, southwestern Uganda	Demielle Kiiza Matu

Title	Author
Participation in cervical cancer screening: An exploration of influencing factors among rural and urban women in Uganda	Susan Acio
Effects of vaginal infections on the emotional and social health among secondary school girls in Sheema district western Uganda	Madina Balinabyo
Caregivers perspectives of sickle cell disease among children and related health seeking behavior	Daniel Osinde
Teenagers' perception of teenage pregnancy in rural Pakwach district in Uganda	Felix Okello
Factors determining insecticide treated net utilization as malaria preventive strategy in Adyel division, Lira municipality, Uganda	Robin Oryem

## Post-Graduate Education

The project included two PhD scholarships embedded in the project at the Department of Social and Cultural Anthropology at the University of Vienna, supported by the Austrian Development Agency (OeAD). Esther Mukooza's study "Cause and Illness Experience of 'Nodding Syndrome' in Uganda: Local Perceptions and Implications for Interventions" focused on nodding syndrome (NS), a poorly understood neurological condition affecting children in parts of northern Uganda and other parts of East Africa. Emerging in communities already shaped by prolonged conflict, displacement, and humanitarian intervention, NS has generated profound uncertainty for affected families and institutions alike. To date, bio-medical investigations have yet to provide definitive causal explanations, while the social, moral, and political dimensions of the condition have remained comparatively underexplored. Situated within medical anthropology, Mukooza's doctoral work adopted an ethnographic approach to examine how NS is experienced, interpreted, and managed in everyday life by affected children, caregivers, health workers, and community members. Multisite ethnographic research conducted between 2014 and 2017 allowed for comparison across institutional, community, and policy levels. Esther collaborated closely with local research assistants, health workers, and community leaders to ensure culturally grounded data collection and ethical engagement with vulnerable populations. Reflexivity, attention to power relations, and participatory feedback were central to her research

practice. These principles enabled her to translate her findings into forms accessible to both communities and policymakers.

The study critically examined institutionalized care arrangements, including the role of rehabilitation centers like Hope for Humans, as well as their impact on family life, caregiving practices, and community relations. Attention was given to how these broader histories of war, displacement, poverty, and chronic neglect in northern Uganda shape care. Over the years, the discourse on NS has evolved from early clinical descriptions of this mysterious childhood condition, which is characterized by repetitive head nodding, seizures, cognitive decline, growth retardation, and high levels of morbidity and mortality, to a more complex, multidisciplinary field of inquiry. Initial research focused largely on identifying defining symptoms and possible etiologies, with strong emphasis on neurological manifestations and epidemiological clustering in northern Uganda, South Sudan, and Tanzania. As biomedical investigations expanded to examine links to epilepsy, onchocerciasis, malnutrition, toxic exposures, and infectious or autoimmune mechanisms, no single causal pathway has been definitively established. This has contributed to persistent scientific uncertainty. Alongside biomedical advances, social science, and medical anthropology research have gained prominence, highlighting how NS is embedded in histories of conflict, displacement, and humanitarian response. It also shows how stigma, caregiving burdens, and institutional care arrangements shape lived experience. Thus, this expanding discourse has shifted from narrow symptom cataloging toward more holistic understandings of NS that integrate clinical, social, political, and ethical dimensions, while also exposing enduring gaps in sustained research investment and long-term support for affected communities.

The research provided nuanced insights into the experience of health interventions in contexts of chronic insecurity and limited resources. It demonstrated how institutionalized rehabilitation care reshapes family dynamics, caregiving burdens, and moral obligations. It also revealed gaps between biomedical models and local explanatory frameworks (Mukooza, 2018). Additionally, it highlighted how displacement, legal precarity, and livelihood insecurity intersect to shape access to health services and trust in humanitarian actors.

Esther's research in Uganda has had sustained impact at both community and disciplinary levels. Her work has advanced the understanding of a highly stigmatized condition and strengthened medical anthropology as a field of inquiry, teaching, and practice. Her work was deliberately positioned at the intersection of research, training, and community engagement, ensuring that knowledge production remained accountable to

affected communities while contributing to academic and policy-relevant debates. For communities affected by NS, this research created spaces for recognition, voice, and dignity in contexts where families had long experienced marginalization, stigma, and uncertainty. Contributions were also made towards greater community visibility in national and international discussions on NS, helping to reframe affected families as knowledgeable actors navigating complex care landscapes rather than passive victims. Findings were shared through community feedback sessions and engagement with local stakeholders, supporting dialogue around care practices, institutional responsibility, and the long-term social consequences of the condition. Importantly, the research underscored the cumulative impact of protracted displacement, post-conflict recovery, and chronic neglect on children's neurological health, thereby situating NS within broader histories of violence, poverty, and structural inequality in northern Uganda.

A core impact of this work lies in its integration into MA-MEDANIH postgraduate training. Students were mentored in ethnographic methods, qualitative analysis, research ethics, and community-engaged scholarship. Through this training, students were exposed to applied medical anthropology grounded in local realities, enabling them to critically engage with illness, disability, humanitarian intervention, and health systems from culturally and politically informed perspectives.

In his PhD project, "Structural Processes and Meanings of a Local Disease-Causing Category *Te Lak* among the Acholi, Northern Uganda," Aloysius Nnyombi examined the landscape of disease, healing, and health landscape in selected Acholi communities. The entry point is a locally defined disease-causing agent, *te lak*, which literally translates to "under the tooth". Biomedically, *te lak* are unerupted primary canine tooth buds (Iriso et al., 2000). The Acholi identify these buds as one of the causes of malaria, diarrhea, pneumonia, and other childhood diseases (Accorsi et al., 2003; Girgis et al., 2015). Grounded in the structural constructivism theoretical approach (Dressler, 2007), this study situates *te lak* at the intersection of cultural, political, and economic powers, illustrating its dominance in shaping healthcare discourse in the post-conflict communities.

The study employed an ethnographic approach, including ethnographic interviews, participant observation, in-depth interviews, and document review, to "learn about people's lives from their perspective and within the context of their own lived experience" (O'Reilly, 2005, pg. 84). The study was conducted in Gulu district in northern Uganda among the Acholi community. Data was collected from communities that had formerly hosted internally displaced peoples' camps (IDPs). A total of 69 (56 female and 13 male) participants, including *te lak* specialists,

caregivers who had sought treatment for diseases thought to be caused by *te lak*, government health unit management committee members, and other community members, took part in the study. The study found that *te lak* transcends its characterization as a disease-causing agent and harmful practice. Rather, it is integrated into the moral fabric of the communities studied. *Te lak* is a means by which parents fulfill ascribed social or gender roles and community structures exercise their power and is a practical means through which the community copes with the effects of the prolonged civil war. *Te lak* holds generative potential, fostering exchange practices that exist at the intersection of moral economies and commodification, and creates an epistemic community that preserves prized local medical knowledge through generations. The community's engagement with *te lak* can also be seen as a practical response to the systemic deficiencies in Uganda's professional medical system. Parents often turn to *te lak* therapeutics when biomedical interventions fail to yield satisfactory health outcomes for their children. Thus, *te lak* is a consequence of the government of Uganda's low investment in the health sector.

The project revealed that a thorough understanding of health and disease requires moving beyond the binary framework common in anthropology toward an integrative approach that considers illness and health at the intersection of agency and social and economic inequalities (Dressler, 2007; Forsyth, 2015). From this perspective, health is shaped not only by culture, but also by the exercise of power throughout healthcare systems. This implies that we must pay attention to how illness is interpreted through cultural frameworks and how it is produced or reinforced by broader structural forces. Taking this dual approach allows us to understand how practices labeled as harmful can function as socially meaningful responses to structural violence, historical trauma, or disrupted social orders.

MA-MEDANIH has also motivated students who have successfully completed the program to enroll in doctoral programs at institutions abroad. Four recent examples demonstrate the program's impact. Kiiza Matu Demielle is pursuing his PhD in the Department of Social and Cultural Anthropology at the University of Helsinki in Finland. His dissertation is titled "Medical Practices and Therapeutic Collectivism Among Refugees in Southwestern Uganda." His research will be based on ethnographic fieldwork in a refugee camp in western Uganda and will focus on aspects of medical pluralism among refugees in Uganda. Sarah Namirembe is pursuing her PhD in the anthropology program at Case Western Reserve University (CWRU) in Ohio on recovery from alcohol and other substance abuse in Ugandan communities. Leo Okoya is

enrolled at the University of Nairobi's Institute of Anthropology, Gender, and African Studies, and he is affiliated with Makerere University and the University of Oslo. His PhD project "Socio-Ecological and Cultural Factors in the Use of Pesticides in Smallholder Agrifood System in Koch Goma Sub-County, Northern Uganda" is part of the AnthEM Project (supported by NORAD) "Medical and Environmental Anthropology for East Africa in the 21st-century" that focuses on the nexus between health and environment that shapes emerging challenges to human and nonhuman health in the 21st century. Grace Oroma-Lanek is pursuing her PhD thesis at the Bernhard-Nocht Institute for Tropical Medicine (BNITM). Her research project is titled "Care and Care Practices during and after Ebola Outbreaks: An Ethnographic Investigation of Frontline Healthcare Workers and Ebola Survivors of the 2000–2001 Ebola Outbreak in Gulu, Uganda." She is interested in how care changes and degrades due to medical interventions that are perceived as degrading treatment by Ebola survivors.

Furthermore, several students from the Medical University of Vienna (MUW) have done clinical rotations and conducted research for their MD and PhD studies in Uganda (e.g., Huebl et al., 2016; Huebl et al., 2020, 2024, 2025).

## International Project Landscape

OeAD PhD grants often opened opportunities for other grants or scholarships. For example, the long-standing scientific cooperation between Uganda and Austria led to a project financed by the European Union's Horizon 2020 research and innovation program titled "A Global Social Sciences Network for Infectious Threats and Antimicrobial Resistance" (Sonar-Global). Sonar-Global is a new social science network for infectious threats and antimicrobial resistance aimed at better integration of social science research and practice in addressing infectious threats (Giles-Vernick et al., 2019). The project sought to develop and coordinate social science expertise to effectively impact public health interventions in control of infectious threats like Ebola and COVID-19. Over three years, Sonar-Global provided learning opportunities, a platform for data sharing, and tools development and promoted collaboration between African, Asian, and European social and health scientist researchers and infectious diseases program implementors. Sonar-Global contributed to building social science curricula to train collaborators in infectious disease control and examining antimicrobial resistance. During infectious disease

outbreaks such as Ebola and COVID-19, the project helped build the capacity of social scientists in East and Central Africa to develop, test, and adapt models and tools to assess community vulnerability and strengthen local resilience to infectious threats (Kutalek et al., 2023). For instance, at Makerere University, local social scientists from academic and public health programs received training to develop and adapt a vulnerability assessment tool. A vulnerability assessment was then conducted in urban and peri-urban areas in Kampala and in regions along the Uganda–Democratic Republic of Congo border that had recently experienced an Ebola outbreak. Upon adoption and testing, this vulnerability assessment tool enabled a better understanding of the pathways to care during the Ebola outbreak. This understanding would later contribute to the preparedness and response efforts such as the one posed by COVID-19.

The project, “Mitigating the Cultural, Social and Organizational Barriers to Meeting the Needs of Patients with Major Limb Loss (MLL) in Northern Uganda” was a collaboration between Gulu University and the University of Manchester. It was financed by an AHRC & MRC<sup>1</sup> grant from the United Kingdom. Constantine Loum was the principal investigator of the project, which has since been completed successfully, with some dissemination activities having been carried out. Loum was also coprincipal investigator in the project “Perspectives of Colorectal Cancer Patients and Community Stakeholders on the Challenges for Research: Views from Eight Selected Districts in Northern Uganda,” which was supported by the Rising Tide Foundation for Clinical Cancer Research in Switzerland.

Esther Mukooza has conducted applied research with Doctors Without Borders in Eswatini, Tanzania, and Nigeria. Her work has focused on marginalized and vulnerable populations, including refugees, mobile communities, women at heightened risk for HIV, and populations living in epidemic-prone settings. In Eswatini, she documented women’s decision-making around oral and vaginal pre-exposure prophylaxis (PrEP, dapivirine ring) for HIV, showing how gender norms, relationship dynamics, and everyday constraints influence the uptake of biomedical prevention. Having multiple HIV prevention options meant a significant increase in choice and personal agency. Women emphasized that the ability to choose between oral and vaginal PrEP allowed them to align their prevention strategies with their bodily preferences, daily routines, relationship dynamics, and perceptions of privacy and stigma (Mukooza et al., 2025). This choice was particularly impactful in contexts where

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1 Research grant of the Arts and Humanities Research Council (AHRC) and Medical Research Council (MRC)

negotiating condom use was difficult or where overt pill taking risked the disclosure of HIV-related concerns. By acknowledging women as knowledgeable decision-makers rather than passive recipients, the services strengthened their confidence and self-efficacy and promoted sustained engagement with prevention.

Her findings emphasized the importance of socially informed program design and the limitations of one-size-fits-all global health interventions. Her research and subsequent interventions had a tangible and multidimensional impact on beneficiaries, especially women at risk of HIV infection and patients undergoing multidrug-resistant tuberculosis (MDR-TB) treatment (Mukooza et al. 2024). For individuals diagnosed with acute HIV infection, timely access to testing and immediate initiation of antiretroviral therapy enabled rapid viral suppression. Beneficiaries understood this to be critical not only for their own health but also for preventing onward transmission. Upon learning that early treatment could reduce infectiousness, participants expressed relief and reassurance, which reinforced their motivation to adhere to care despite the emotional shock of diagnosis (Mukooza et al., 2023). Esther has presented her research at major international scientific conferences through oral and poster presentations on HIV prevention, diagnosis, and community-based care. She has also received an Ernst Mach Research Grant from the Austrian government through the OeAD and has recently worked on a PED-EM (pediatric eumycetoma) project based at the Medical University of Vienna and conducted in collaboration with the Drugs for Neglected Diseases Initiative (DNDi) (Erber et al., 2024).

Overall, her research has had an impact by (1) amplifying the voices and experiences of affected communities in northern Uganda, (2) strengthening postgraduate training and local capacity in medical anthropology, and (3) contributing to global, interdisciplinary scholarship on neurological illnesses and health inequities. This work demonstrates how medical anthropology can serve as both a critical and practical discipline by remaining grounded in community realities while actively engaging national and international academic networks. In this way, it advances knowledge, informs policy, and supports more just and context-sensitive health responses.

Aloysious Nnyombi participated in two commissioned systematic reviews. One was titled “Effects of Gender Norms on Health and Livelihood Outcomes in LMICs” and was conducted for the Gender Norms Learning Agenda Team of the Bill & Melinda Gates Foundation (BMGF). The purpose of the review was to generate evidence to inform BMGF’s adolescent and youth learning agenda. This review was conducted in col-

laboration with the University of California, San Diego's Centre for Gender Equity, Solina Group Nigeria, and PCI India. The second examined norms-shifting policy and program initiatives that address violence and girls' education in Eastern Africa, and it was funded by the Wellspring Philanthropic Fund. It is intended to inform investments in social norms research, programing, and policy aimed at preventing violence and promoting girls' education. This review was implemented in partnership with the University of California, San Diego Centre for Gender Equity. The same fund supported a learning initiative on preventing violence against children (VAC) in East Africa. This initiative aims to improve learning-oriented programing, strengthen functional measurement systems, and support partners in documenting and communicating evidence.

## Conclusion

What impact do these projects have on the landscape of medical anthropology in Uganda and East Africa? What research questions and theoretical approaches could be useful for future medical anthropology work? What does this mean for the communities involved?

At the national level, the projects have helped establish medical anthropology as a critical discipline for understanding complex health conditions in Uganda. Collaborating with renowned medical anthropologists at Makerere University (e.g., Paul Bukuluki, David Kyaddondo, David Kaawa-Mafigiri, Eddy Walakira, Stella Neema) has strengthened the application of intersectional and socially attuned frameworks to research. These scholars helped contextualize many of the projects' findings within broader debates on social inclusion, gender, caregiving, and humanitarian response. They also facilitated interdisciplinary dialogue between anthropology, pediatrics, nutrition, and health policy. Through this collaboration, ethnographic insights informed discussions on, e.g., child and adolescent health, service delivery, and system-level responses to health conditions in post-conflict settings. These partnerships helped bridge disciplinary silos and reinforced the value of anthropological evidence in national health discourse.

Many long-term engagements formed as visiting lecturers enabled the translation of Ugandan-based research into international teaching and debate. These engagements have introduced students and scholars to African-centered perspectives on illness, uncertainty, and the politics of care. Medical anthropology in Uganda and across East and Southern Africa is well positioned contribute to our understanding of health, illness, and

care in contexts shaped by inequality, rapid social change, humanitarian intervention, and epidemiological transition.

Future research should continue to move beyond disease-specific framings and toward analyses that highlight lived experience, power, history, and structural conditions. The following interrelated research questions and theoretical approaches would be particularly promising: How do people live with chronicity, uncertainty, and care over the course of their lives? How do communities negotiate plural health systems and therapeutic authority? What are the social consequences of global health interventions and technologies? How do histories of violence, displacement, and humanitarianism shape present-day health? How are inequalities produced and experienced at the intersection of gender, age, disability, and poverty? How can we critically engage with questions of whose knowledge counts, strengthen African-led scholarship, and challenge extractive research practices? What does this mean for the communities in which we work? Ultimately, medical anthropology in the future has the potential to act as a bridge – linking communities, health systems, and global health actors – while producing knowledge that is both analytically rigorous and socially transformative.

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# Perspectives on Blended Learning

Blended learning (Graham, 2006; Stein & Graham, 2020) is an educational approach referring to a blend of online and face-to-face instruction, creating a flexible and often more personalized learning environment. It aims at allowing students to engage with digital content asynchronously while also participating in synchronous activities such as live discussions or practical sessions. This dual-mode structure supports varied learning styles and offers opportunities for both independent study and collaborative engagement. Graham (2006), however, also criticizes the ambiguity of the term “blended learning” that would allow for any combination of learning systems or methods.

Earlier, Driscoll (2002) had already reached beyond a simplistic dual-mode media-centric understanding by also including a mix of pedagogical strategies such as constructivism, behaviorism, and cognitivism, and a combination of instructional technology with actual job tasks to create a harmonious effect of learning and working. Cronje (2020) provides a detailed analysis of literature and viewpoints, offering a decision matrix in support of identifying an “optimal blend” of learning methods and technologies.

At the core of blended learning are synchronous and asynchronous modalities (Hrastinski, 2008; Stanford Teaching Commons, n.d.). Synchronous learning involves real-time interaction, whether in person or online, enabling immediate feedback and fostering a sense of community. Asynchronous learning, on the other hand, allows students to access materials and complete tasks at their own pace, promoting autonomy and flexibility. Effective blended learning design as increasingly adopted in higher education (Graham et al., 2013; Garrison & Vaughan, 2012; Dziuban et al., 2018) aims at balancing these modes to maximize engagement and learning outcomes. For example, asynchronous prework can prepare students for deeper synchronous discussions, while recorded lectures and forums extend learning beyond scheduled sessions.

Within the abovementioned APPEAR DEvision project, an a priori SWOT analysis of blended learning in higher education was conducted with instructors to assess their initial perspective on this proposed approach. This exercise revealed their take on key strengths such as scal-

ability, accessibility, and adaptability to diverse learner needs, and on opportunities including leveraging digital infrastructure for innovation. However, they also acknowledged persisting challenges, including technological limitations, inconsistent internet access, and the need for teacher training. Threats were identified from inadequate policy frameworks, digital fatigue, and equity concerns.

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Flexibility in learning pace and location</li> <li>• Combined benefits of face-to-face and online learning</li> <li>• Support for diverse learning styles</li> <li>• Enhanced student engagement through varied formats</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Requirement for strong digital infrastructure and access</li> <li>• Demand for high(er) levels of self-discipline from students</li> <li>• Need for teacher training in digital pedagogy and tools</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Expansion of international and cross-institutional programs</li> <li>• Integration of innovative technologies (AI, GIS, data analytics, etc.)</li> <li>• Development of personalized learning pathways</li> <li>• Post-pandemic demand for hybrid education models</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Digital fatigue and screen time overload</li> <li>• Inequity in access to devices and internet</li> <li>• Resistance to change from traditional teaching models</li> <li>• Data privacy and cybersecurity concerns</li> </ul>

Despite some concerns (also discussed in Boelens et al., 2017), blended learning was (and still is) considered a promising model for modern education, especially in continuing education and transdisciplinary contexts where hybrid approaches are increasingly valued.

## Prior Experience with Blended Learning Settings

The idea to implement a blended learning framework within an APPEAR project originated from the authors' prior experience with Erasmus+ Blended Intensive Programs (BIP). From 2021–2024 a 6 ECTS course titled “Digital Earth Citizens” was offered at the University of Salzburg, aiming at (meta-)objectives like:

- Offering international study experiences without requiring full-semester mobility, which frequently delays graduation and incurs extra costs
- Facilitating low-threshold inter- and transdisciplinary engagement complementing students' curricula
- Enabling a combination of conceptual (knowledge) and technical (skills) learning outcomes
- Emphasizing the societal impact of public participation in policy making and decision support

This series of BIPs was developed and implemented with partner HEIs from the Czech Republic, Hungary, Poland, Romania, and Slovakia. Students joined biweekly live webinars, worked on practical assignments, and individually developed public participation projects before meeting in person for a final week of presentations, mutual feedback, and discussions. Overall, the “Digital Earth Citizen” BIP was not only considered successful by all participants but also led to new career trajectories for several students. It also demonstrated the validity and importance of the above listed generic objectives as well as the potential of project-based active learning in blended settings.

## The APPEAR DEvision Experience

Blended learning has obviously gained prominence post-COVID due to accelerated adoption of technologies, integrating experience from online learning with the desire for and established advantages of physical classroom-based environments. After several years of organizing Erasmus BIPs, this approach informed the design of an APPEAR-supported collaboration with partners from Armenia and Kyrgyzstan. Working across boundaries of language, academic traditions, and systems, as well as qualification frameworks and professional perspectives, provides relevant insights into the SWOT of these methods. Among other aspects, the principle of always having a teacher in charge and communicating was fully confirmed.

The DEvision initiative (Strobl & Nazarkulova, 2025) was codesigned and codeveloped with partners from Armenian and Kyrgyz universities. It started from recognizing previously unmet demands in the field of geoinformatics capacity development, specifically a need to provide basic qualifications to students across different disciplines, and in addition to offer continuing education options to working professionals. Geoinformatics, broadly speaking, is the methodology behind geographic information sys-

tems employed by a variety of disciplines and institutions to add the value of a spatial perspective to their respective domains. While geoinformatics today is an academic discipline and field of study (Strobl, 2017), its fundamental competences (Wilson, 2020) are rarely included in curricula of, e.g., ecology, business, administration, transportation, public health, and all those other subjects standing to benefit from an explicit spatial view.

Integration of basic geoinformatics competences into all these disciplines faces practical obstacles of curriculum and schedule coordination, availability of teachers, access to technology infrastructure, and IT skills. A blended learning approach therefore was chosen to mitigate some of these issues, and to facilitate the option of reaching out to in-service professionals. Within the DEvision initiative, five teaching and learning modules were developed as open educational resources (OER) hosted on a learning management platform (LMS):

- Digital Earth Basics
- Geospatial Models and Representations
- Geo-visualization and Geo-communication
- Remote Sensing and Image Analysis
- Spatial Analysis

The syllabus for all material is built upon freely available online learning resources and supported with readily accessible cloud-based geoinformatics technologies. According to the blended learning paradigm, however, these modules are distinctly not designed for independent self-learning but require guidance by teachers as well as independent assessment of learning outcomes before any credit is awarded.

The DEvision initiative demonstrates success with teaching and learning not only bridging space and time, but also reaching across national boundaries, societies, and educational systems. While research collaborations towards the joint and shared production of knowledge already have a longer tradition, educational pathways are just starting to break out from their national silos. Blended learning is demonstrated to be one relatively easily achievable building block for course-level integration and collaboration.

## Insights from a Post-Experience Survey

An exploratory survey was administered to teachers and student participants in blended learning courses during the summer of 2025, aiming at indicative qualitative assessment of motivational aspects. This survey is

by no means considered representative, only aiming at soliciting feedback from individuals exposed to specific courses managed by the authors.

Over a three-month period, 27 student and 19 teacher responses (total 46) were collected. Respondent experience with blended learning varied with 16 having had one course, five having had two courses, 12 having had three courses, and the remainder having been exposed to four or more courses. Respondents identified the location of their on-site residential experience to include Austria, Czechia, Kyrgyzstan, and Armenia. The overall favorability rating of the blended learning approach averages 4.5 on a 5 point scale.

Most responses were related to Erasmus+ BIP experiences:

Blended Intensive Program (Erasmus)	25	54.35%
Residential course with online elements	12	26.09%
Online course with mixed synchronous / async elements	6	13.04%

Survey questions were differentiated between student and teacher roles, all using a five-step scale of Strongly disagree – Disagree – Neutral – Agree – Strongly agree. In Tables 1–4, the two favorable categories are summarized in the column “Strongly/agree,” with the total number of responses in brackets. To better account for opposite opinions and distributions of responses, the response scale was coded as 1–5 and (despite the ordinal scale level) summarized into a weighted average resulting in a mean rank shown in column “Avg” and used for sorting the responses starting with top-ranked choices.

Table 1 shows the motivational response from participating students sorted from very positive to somewhat less positive, with overall convenience factors dominating perceived learning outcomes:

Motivation and Justification: Reflecting on my main reasons for participating in a blended learning course, please rate the following criteria:	Strongly/ agree	Avg
Convenience: <i>I appreciate being able to access course materials anytime and anywhere.</i>	24 (27)	4.48
Engagement: <i>I appreciate being able to actively work with course materials anytime and anywhere, while engaging with peers and instructors.</i>	24 (27)	4.48

Motivation and Justification: Reflecting on my main reasons for participating in a blended learning course, please rate the following criteria:	Strongly/ agree	Avg
Interaction Opportunities: <i>I benefit from the mix of online discussions and in person interactions with peers and instructors. This also includes the interaction with students from other institutions and countries.</i>	23 (26)	4.35
Technology Integration: <i>Using digital tools and platforms in blended learning enhances my learning experience.</i>	23 (27)	4.33
Flexibility: <i>Blended learning allows me to manage my time more effectively by studying at my own pace.</i>	21 (26)	4.23
Improved Understanding: <i>Having both online resources and face-to-face instruction helps me understand the material better.</i>	20 (26)	4.19
Personalization: <i>Blended learning helps me tailor my learning experience to my individual needs and preferences.</i>	18 (27)	4.00
Career Readiness: <i>Blended learning helps me develop digital and communication skills that are valuable for my future career.</i>	17 (25)	4.00
Assessment Variety: <i>Blended learning offers a wider range of assessment methods that suit different learning styles.</i>	16 (25)	4.00
Self-Discipline: <i>Blended learning encourages me to take more responsibility for my own learning.</i>	18 (27)	3.93

Table 1: Blended learning – student experience

Table 2 summarizes the perceived and experienced challenges faced by students during participation in a blended learning course, not showing very substantial differences but still highlighting technical issues.

Challenges and Obstacles: My experience and learning outcomes were somewhat impacted by these factors:	Strongly/ agree	Avg
Technical Issues: <i>I sometimes struggle with accessing or using the technology required for the online components of blended learning.</i>	7 (26)	3.85
Time Management: <i>I find it challenging to manage my time effectively between online and in person learning activities.</i>	10 (26)	3.77

Challenges and Obstacles: My experience and learning outcomes were somewhat impacted by these factors:	Strongly/ agree	Avg
Language and Communication: <i>Working in a foreign language makes it harder for me to fully achieve the outcomes of a course.</i>	6 (27)	3.52
Motivation and Self-Discipline: <i>Staying motivated and focused during online learning sessions is difficult for me.</i>	10 (26)	3.50

Table 2: Student experience – challenges?

Switching to a teachers' perspective, table 3 allows an interpretation of motivations for engaging with a blended learning experience, with none of the offered options identified as irrelevant.

Motivation and Justification: Reflecting on my main reasons for designing/leading a blended learning course, please rate the following criteria:	Strongly/ agree	Avg
Preparation for Emerging Teaching Trends: <i>Blended learning prepares me for the evolving demands of modern education.</i>	19 (19)	4.53
Access to Data and Analytics: <i>I value the ability to track student progress and participation through digital tools.</i>	17 (19)	4.37
Professional Growth: <i>Implementing blended learning has contributed to my development as an educator.</i>	17 (19)	4.37
Instructional Flexibility: <i>Blended learning allows me to deliver content in more flexible and creative ways, also reaching out beyond my usual student audience.</i>	18 (19)	4.32
Collaboration Opportunities: <i>Blended learning facilitates more collaboration between students and between teachers, also among teachers from different institutions.</i>	17 (19)	4.32
Resource Availability: <i>I appreciate having access to a wide range of digital resources to support my teaching.</i>	16 (19)	4.26
Support for Differentiated Instruction: <i>Blended learning helps me better address the diverse learning needs of my students.</i>	16 (19)	4.11
Efficient Use of Class Time: <i>Blended learning enables me to use in person class time more effectively for discussions and hands-on activities.</i>	15 (19)	4.05

Motivation and Justification: Reflecting on my main reasons for designing/leading a blended learning course, please rate the following criteria:	Strongly/ agree	Avg
Improved Learning Outcomes: <i>Blended learning helps improve student understanding and performance.</i>	12 (17)	3.82
Enhanced Student Engagement: <i>I find that students are more engaged when I combine online and face-to-face teaching methods, and when engaging with students beyond their usual peers.</i>	14 (19)	3.79

Table 3: Blended learning – teacher experience

Finally, table 4 summarizes priorities of teachers’ concerns, with workload expectations plausibly leading the list followed by doubts about keeping students engaged.

Challenges and obstacles: My experience and students’ learning outcomes were somewhat impacted by these factors:	Strongly/ agree	Avg
Time and Workload: <i>Preparing and managing both online and in person components of blended learning significantly increases my workload.</i>	12 (19)	3.74
Student Participation and Motivation: <i>It is difficult to keep students consistently motivated and engaged in the online components of blended learning.</i>	9 (19)	3.47
Language and Communication: <i>Teaching and communicating in a foreign language makes it harder for me and/or for students to fully achieve the outcomes of a course.</i>	7 (16)	3.12
Technical Difficulties: <i>I face challenges with technology access, reliability, or digital tools when implementing blended learning.</i>	3 (19)	2.79

Table 4: Teacher experience – challenges?

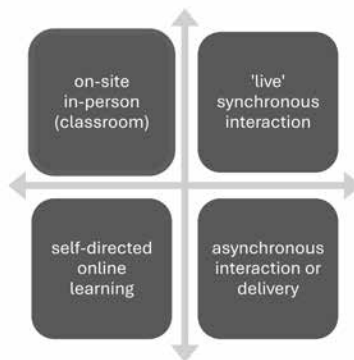
Again, the above survey summaries are intended as indicative feedback from recently delivered courses and do not provide generalized insights into the benefits and concerns of blended learning. Nonetheless, the authors intend to further extend the application of the blended learning

paradigm based on generally positive feedback and outcomes, and the potential to expand the target audience of learners across disciplines as well as along lifelong learning pathways.

## Summary

Blended learning is an established educational approach that combines traditional in person classroom (or field work) instruction with online learning experiences, creating a more flexible and potentially also personalized learning environment. This method allows students to engage with some of the content at their own pace through digital platforms while still benefiting from synchronous interaction, guidance, and collaboration. Blended learning sits at the intersection of multiple modes of teaching and learning, most notably synchronous vs. asynchronous learning and face-to-face vs. distance education.

Synchronous learning, whether in person or online, involves real-time interaction – think live classroom discussions, video conferencing, or live practicals – facilitating immediate feedback and collaborative engagement. Asynchronous learning, in contrast, allows students to access lectures, assignments, and resources on their own schedule, supporting flexible and self-paced study. On the spatial dimension, face-to-face learning provides direct, personal interaction in a physical classroom, which can foster deeper relationships and immediate feedback based on perceiving a fuller setting, while distance learning utilizes digital platforms to bridge geographical distance, making education more accessible. Blended learning harmonizes these modes, often combining live virtual sessions, self-guided online modules, and in person activities to offer a dynamic, adaptable learning ecosystem tailored to different learners' needs and contexts.



Blended learning therefore offers students flexibility and independence while maintaining personal interaction. Teachers can tailor instruction and track progress more effectively, though it demands careful planning and tech skills. Bridging space and time, blended learning merges online and in person experiences, combining synchronous and asynchronous elements to support varied learning styles and to create new opportunities for teaching and learning alike.

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# Growing Stories and Relationships: The AMUTI Journey

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Using a relational perspective, in this chapter we cultivate a “tree of stories” that follows the progression of the AMUTI<sup>1</sup> project and depicts the richness of the relationships created through this journey. From the initial spark, the personal narratives emerging from interviews illustrate the deep roots necessary for sustained educational and institutional impacts. These narratives describe the layered integration and shared relationships between project members from BOKU University, Muni University, and PALM Corps, as well as inclusive connections with participating PhD and master’s students and diverse actors in refugee-host communities. Applying transdisciplinary, co-creative, gender transformative, and qualitative methods and approaches, the story of AMUTI sheds light on the importance of personal relations. We firmly believe that personal relationships are a key factor in driving change at different scales, from micro- and meso- to macro-level. Donors should consider these personal relationships and different scales of project success. By focusing on the strengths

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1 Full project title: Strengthening transformative capacity of Higher Education Institutions for equitable and resilient governance of natural resources in refugee-host community settings in West Nile, Uganda. The acronym AMUTI means “working together” in the local language Lugbara, reflecting the guiding principle of this collaboration.

of relational processes, this chapter is an invitation to rethink and value the important role of human relationships in fostering sustainable development and institutional growth.

## Introduction

Uganda hosts over 1.9 million refugees, making it the largest refugee hosting country in Africa. Most are hosted in the West Nile and other northern regions, which makes up over 60% of the refugees in Uganda (UNHCR, 2025). While humanitarian assistance is decreasing, pressure on natural resources in the refugee-host communities is increasing (Byaro et al, 2022; Neiman & Titeca, 2023; Oxfam, 2025). In response, the overall objective of the APPEAR-project AMUTI is to strengthen the transformative capacity of higher education institutions for equitable and resilient governance of natural resources in refugee-host communities. To achieve this objective, the project focuses on increasing the capacity of all partners involved in teaching, research, and community engagement, and on facilitating co-learning processes among project partners and refugee-host communities on the governance and sustainable use of soil, water, and energy sources. The main partners in the project are Muni University (project lead), PALM Corps, and BOKU University.

Building on a preparatory project, AMUTI is in the third year of its implementation. Several of the project's major milestones have been achieved. Four PhD candidates have facilitated co-creative research on their respective research papers: "Negotiating Inclusion: An Intersectional Feminist Approach to Natural Resource Governance" (Caroline Paparu), "Institutional Actor Interaction in the Governance of Natural Resources" (Jessiecah Apili), "Factors Influencing Adoption of Renewable Energy Interventions: A Case of Refugees and Host Communities" (Denis Gobo), and "Fostering Soil Health Improvement for Enhanced Sorghum Productivity in the West Nile Refugee Settlements of Uganda" (Beatrice Sadina). A new master's curriculum for Muni University and a community engagement strategy have been developed, and a summer school with Muni and BOKU students was implemented in 2025. The summer school was hosted by Muni University and a majority of the experiences took place in the village of Siripi, within the wider refugee-host community at Rhino Camp Refugee Settlement. Planning is underway for a second summer school that will take place in July 2026.

In this chapter, we take the opportunity to look back and look ahead through a relational perspective. Rather than explaining change through

cause-and-effect models, we are interested in unfolding processes and interdependencies, as well as how practices, meanings, and collaborations have emerged. In November and December 2025, we interviewed 21 project partners, community actors, PhD candidates, and master's students who participated in the 2025 summer school. The emerging rich narratives were coded and organized into broader themes, which guide the structure of the following sections. Interview excerpts are used throughout the chapter to foreground individual perspectives and lived experiences. In the following sections, we highlight relationships spanning from the initial conception of AMUTI to its current state, and from the intra-project level to relationships across disciplines, refugee-host communities, and institutions. We begin our journey with the preparatory phase, starting in April 2022, which led to a common understanding of concepts such as transdisciplinarity, co-creation, transformative gender perspectives, and qualitative research approaches.

## The Seed of AMUTI: From Idea to Alliance

*There came a request from Clement Okia at Muni University, if we would be willing to be a partner in an APPEAR project. (...) So we had 10 days and I approached Lorenz and we said, let's try, and that will also show us if we are able to put something together in a very short time.*

Stefanie Lemke, Professor at BOKU University

AMUTI did not emerge from a fully formed concept, but from a gradual process of building relationships between individuals and partnerships between institutions. An integral piece of the success so far was the preparatory phase, which created the time and space for the cocreation of a strong concept and shared vision and shaped the collaboration of partners who had, in most cases, not worked with one another. The team at MUNI University initiated this process, seeking partners for community-engaged research and capacity building, which led to the inclusion of PALM Corps as an NGO partner, and BOKU University as an academic counterpart. Crucially, the preparatory funding enabled face-to-face engagement. The initial visit in April 2022 by the BOKU team to MUNI University, PALM Corps, and the settlements transformed abstract ideas about refugee-host contexts into an understanding of realities on the ground. Philip Omwene, lecturer at Muni University explains:

*And we had BOKU visit Muni University, share with us and see realities on ground. Because at first, when you're on paper and on Zoom, when we talked of refugees, they were maybe thinking, the refugees are in camps (...). And we sat together, had brainstorming meetings, writing sessions, and we submitted. The concept, the final proposal to APPEAR for funding. That was the start.*

This allowed for an iterative project development process, enabling the consortium to integrate local knowledge, institutional priorities, and methodological perspectives into a coherent concept.

The project team chose AMUTI as the project acronym, meaning “working together” in the local Lugbara language. For some, AMUTI sounded like a regional initiative, probably referring to community-based projects. This resonance later revealed itself as symbolic: the project would aim at linking institutions, disciplines, and communities across contexts. As partners began to understand who was involved and why, the name became a memorable connection between the university and the community. Bona Maandera, principal quality assurance officer at Muni University, remembers:

*I had gone to buy something in town on the weekend, and I had put on the AMUTI T-shirt. And then somebody tapped me on my back, said, AMUTI, come and buy from me here! Calling me by the project name felt so nice that they recognized “working together” even by reading what was on the T-shirt.*

The preparatory phase also played a significant capacity-building role. Younger researchers at Muni University were given space to lead and a voice to learn project development skills and engage in mentoring relationships. For these early-career researchers and PhD candidates, AMUTI offers a research community that is built collaboratively in non-hierarchical structures for academic discourse, and an arena to experiment with new methods and approaches. As Clement Okia, Professor at MUNI University and AMUTI lead, explains,

*I was looking for people whom I could maybe sort of guide in project development and management. And I found Sandra, and Philip [MUNI project team] (...) and they were willing to learn. (...) So it was more like a mentoring process.*

For the Ugandan NGO PALM Corps, AMUTI represented an opportunity to follow its core mission – to improve the quality of life of vulnerable people through action programs. The collaboration with universities was seen not only as a way to deepen ties in the region, but also as a way to bridge theory and practice, ensuring that development interventions were informed by critical reflection:

*And so when this opportunity came for PALM to partner with the learning institutions and academia that really felt very good because this is the core of what defines us among our peers in West Nile. We want to be known for generating knowledge, questioning knowledge, questioning theories.*

Abbey Anyanzo Thomas, Director of PALM Corps

The preparatory phase led to a full proposal, submitted with key topics to be addressed, namely gender and intersectionality perspectives, interests in diverse learning processes, natural resource governance, and applied research on sustainable agriculture and renewable energy. Partners describe how the preparatory phase allowed these diverse aspects to converge into a more holistic and integrated approach, particularly suited to the complexities of refugee-hosting contexts. Milena Klimek, senior scientist at BOKU University, reflects:

*I think this also attests to the preparatory phase (...). You were really able to develop some meaningful relationships and a way of working. And you can really see even looking at the proposal itself, not the preparatory proposal but the larger proposal, such a different quality.*

At the end of the preparatory phase, AMUTI had already become a web of personal relationships, characterized by trust and shared understanding. In this sense, the “seed” of AMUTI was not only a project proposal, but a “relational space” – one that made subsequent implementation, co-learning, and adaptation possible.

## Project Level Relationships Formed and Strengthened

*Now those are people [the project members] who I just have on speed dial, (...) it has transformed into something really magical.*

Sandra Langi, MUNI University, Assistant Lecturer

During the course of implementation, the network of relationships across institutions, disciplines, career stages, and cultural contexts evolved further. At the institutional level, AMUTI reinforced and expanded cooperation between all partners. The collaboration between Muni University and BOKU University was strengthened through joint teaching, supervision, and research activities. The relationship between the universities and among the partners grew through the development of the summer school held at Muni University and in the refugee-host community at Siripi Innovation Center in July 2025. This was an innovative format and intense organizing endeavor, especially for the Ugandan partners. The relationship between Muni University and PALM Corps gained depth and strategic direction, focusing on local impacts. According to Abbey Anyanzo Thomas, “We are already discussing with Muni how Siripi Innovation Center can be used beyond AMUTI as a learning center for students who are pursuing agriculture, especially.”

PALM Corps’ close ties to refugee and host communities are seen as foundational, enabling not only effective, informed engagement but also aiding students and researchers to navigate and work meaningfully in the field. Without this key relationship, many on-the-ground project activities would not have been possible. Lorenz Probst, senior scientist at BOKU University, reflects: “I think really, really important is the relationship of PALM Corps with the community. Without this, there would be no summer school, there would be no PhDs going to the field.”

Within the different institutions, AMUTI also strengthened internal relationships among colleagues. Working with deadlines and shared responsibility fostered solidarity, mentoring, and mutual reliance. Younger researchers were given space to lead, experiment, and build confidence, while senior staff provided guidance without imposing rigid control. Stefanie Lemke observes:

*Clement Okia, the principal investigator, really is so nice when he says: “Team, what do you think?” You know he has this approach, so there is no tension and nobody is afraid to say something, like the more junior researchers.*

One characteristic of AMUTI, through its participatory nature, has been the flattening of hierarchies. Students, early-career researchers, senior academics, and nonacademic partners engage in open, respectful dialogue and mutual learning. To do this, a safe space of co-learning between and among all partners is offered. Cocreation is facilitated and happens due to the openness of all participants. For some students in the summer school,

this was seen as a real difference from prior academic experiences, often shaped by distance and authority. Amos Arima, MSc student at MUNI University, states:

*The simplicity of our lecturers, our instructors, bringing us together, giving a listening ear to us, correcting us in understanding ways, and trying to bring different principles within a short time, but enabling us to understand was really a very awesome experience.*

In this vein, lecturers and supervisors related to AMUTI have been described as approachable and attentive, creating an environment in which questions, disagreement, and reflection are encouraged. More importantly, a space to be heard was cultivated. This relational shift was intentional, with project partners encouraging meaningful learning even within short time frames. As a result, confidence, agency, and intellectual curiosity were fostered among the different participants.

The deep relationships created during the summer school, and the fact that three BOKU University master's students stayed for another two months in the field after the summer school had ended, are also seen as important and indicate a long-lasting impact. Mixed teams of master's and PhD students from Muni and BOKU universities worked alongside community members, learning to navigate differences in positionality, knowledge, and worldview. The students described these collaborations as transformative in relation to reflexivity, ethical research practice, and participatory methods but even more so as a life-changing encounter:

*I think for me it was a great experience and I could learn so much from her, as Caroline [Caroline Paparu, PhD student funded through AMUTI, based at BOKU University] is from the area. And she knows quite a lot about the context because she has worked in it before. (...) I realized really quickly that for me alone it wouldn't have been possible to do this research in the way we did together.*

Johanna Kristöfel, MSc student, BOKU University

Particularly these student interrelationships were strengthened through presence and everyday interactions, especially during the summer school and field-based activities. Living and working together created opportunities for informal exchanges that deepened trust and cultural understanding. Students and staff from different countries and institutions shared daily routines, meals, and conversations. Sebastian Fiebiger, MSc student at BOKU University, explains:

*So we were like roommates. Every morning we said good morning, every evening we said good night. (...) And in the end it was very sad actually. It was sad that we had to leave. I had a hard time keeping my tears [back].*

Especially for the students, these experiences were often described as significant, highlighting the depth of bonds formed despite participants' diverse backgrounds and the novelty of such encounters. Taken together, these project-level relationships have formed a new and supported network between institutions, across generations of researchers, and also outward to communities and local authorities.

Participants shared that these deep relationships are crucial for collective ownership of the project and its respective impacts. In this sense, AMUTI demonstrates how relational practices can reshape how projects function – transforming collaboration into cocreation and laying foundations for sustained engagement, institutional learning, and future partnerships. In the words of Jane Laguna, Muni University MSc student:

*I was just thinking about where did AMUTI get this team? Because this is a team who is useful, everybody is useful to each other. And there is a lot of cross-learning. Each person has something to say about what she or he is doing and somebody is so much interested to learn about what the other person is doing.*

## Meeting the Community on Common Ground – Cocreation through Layered Actor Integration

*So we were able to sit at the same table, speak together, understand development challenges, and discuss how this could be improved. And for me, this is really what development work is supposed to be.*  
Abbey Anyanzo Thomas

In addition to the deep relationships created between the project members, relationships were fostered with Siripi community members. A priority of the AMUTI project is to facilitate engagement particularly through co-learning processes in Muni University's surrounding communities. The project has been conceptualized as a "holding environment" in which Muni University, BOKU University, PALM Corps, and refugee-host communities jointly increase their capacities. The idea is that such community engagement will enable deeper insights into structural causes of inequality

and challenge and transform gendered social roles and norms seen as hindering more equitable and resilient ways of governance and management of natural resources.

Cocreation in AMUTI unfolded through layered actor integration. Universities, NGOs, communities, local authorities, and refugee-led organizations were brought together at multiple points in the process – during transect walks, focus group discussions, soil testing exercises, the summer school, and community dialogues and feedback meetings. Bona Maandera reflects:

*I think the relationship between MUNI University and the communities (...) [were] both formed and strengthened (...) Going to their fields, interacting with them and giving them that field report (...). I thought really it strengthened people's, especially understanding, of what a university is and what it could do with them and for them.*

Building trust is the first and most critical step. Initial encounters were sometimes marked by hesitation and fear, particularly among community actors. In the words of Beatrice Sadina, AMUTI PhD student based at Makerere and Muni University:

*The fact that PALM Corps has been in existence and have been doing a lot of interventions in relation to livelihoods, it was an easy way for us, the students, to go into the community to fit in there and interactions were really open. You know, there was nothing like these are people from maybe a university, and maybe they're just coming to extract information from us.*

Transparent communication regarding our work, repeated visits, and respectful listening gradually transformed these dynamics. As Jane Laguna points out:

*And then another relationship I got was how to relate with the community. It was very important to me because the summer school exposed us to how to get into the community, how to meet them, how to talk to them, or how to address some few challenges they are facing and it was so nice.*

As relationships deepened, the group could see how community members became more open, confident, and willing to share both challenges and aspirations. Sebastian Fiebiger says, “And after a couple of weeks it

felt like (...) for us [the student researchers] [that] there was a good feeling (...). We felt accepted, we felt welcome. Everywhere we went, not only in this context (...) people were open.”

It is, however, important to note that acceptance could not be taken for granted, but had to be earned through presence, rapport, and reciprocity. Eunice Ondoru, community actor illustrates this:

*Yeah, when you people came in and when you have introduced yourself and the purpose of you coming to the community, I was now feeling free. I said if it is like this it is okay for us to know which nutrients we are lacking so that we can improve our yields and also our soil fertility (...) Now (...) I will feel free to interact or share.*

Some of these relationships deepened into friendships, described by Thomas Icikiti, community actor:

*When you come back to visit, I will welcome you cheerfully as old friends. I consider you my friends now because of the nature of our interaction and the way we spoke to each other, the lessons I learnt from you (...) was good learning and lessons that support growth and will boost empowerment and development. It is for this reason that I consider you as my friends.*

Practical activities – such as soil testing and photovoice sessions – demonstrated value to participants and illustrated how academic engagement can actually facilitate this. The space created by the summer school activities allowed AMUTI to facilitate dialogue in which differences could be articulated, navigated, and transformed into shared, project-related insights:

*We got to work together, we got to eat together, and we got to learn through the different stories that were shared. And it was interesting to see how family (...) decision[s] happens around the family hierarchy, who's making the decision, who is implementing and who is the actual person who is doing the work because then there's other family members that are supervising what this decision is like.*

Caroline Papanu, PhD student funded through AMUTI, based at BOKU University

Participants further emphasized that meaningful and sustainable interventions must emerge from community-identified needs, local knowledge, and shared ownership. The project followed this relational perspective in

rejecting extractive or top-down models of engagement and instead cultivating cocreation as both an ethical stance and a practical methodology:

*I am proud of the way we have supported local people. That area there is really hard. It's hard. Difficult circumstances to live in. Year after year. So the way the project has supported those people, the sense that together we can make a difference. And working together, that is what AMUTI means.*

Bona Maandera

For many project partners and summer school participants alike, meeting the community on common ground was transformative. Community members spoke of empowerment, recognition, and pride in being heard by universities and international partners:

*And the fact that one woman said, "[this is] the first time I step, I put my foot on a campus [MUNI University], I feel very empowered, you know. The first time I bridged this gate, this fence, I came and they allowed me in." So you know, that says a lot already. So we got this kind of feedback from our community participants, community actors, men and women, and it was a great dynamic.*

Stefanie Lemke

As is apparent from the interviews, students and academic partners reflected on learning to confront positionality and appreciate the resilience, capacity, and insight present within communities. Johanna Kristöfel shared:

*When we visited a household for two times, that's when we really got talking and learning more about each other and also learning more about the way of life in Siripi, as a refugee and also the way of life in Austria and could compare a bit better. [I was able] to show that I'm not too good for this kind of work and that I leave them with different experiences than they had previously with other white people or researchers (...) that came before. I think that's something I'm quite proud of.*

## Transformative Learning, Gender and Intersectionality

*But AMUTI was beyond classroom knowledge. It was of real ground experience. It really taught me how different directions research can take. Most times what we think in class is not necessarily what's on ground.*

Amos Arima

Across students, academics, practitioners, and community members, participants described shifts in thinking that emerged from the experience, dialogue, and reflection in the AMUTI activities. One central learning was that gender is not a technical “add-on” to projects, but a lived, relational, and structural dimension of everyday life. Several participants reflected on moments of discomfort that became catalysts for learning. For example, assumptions about who can facilitate women’s groups, who holds authority to speak on gender, or who performs particular forms of labor were challenged in practice. These moments revealed that gender-sensitive work requires reflexivity, positional awareness, and, at times, stepping aside to create appropriate spaces. The recognition of the importance of women facilitators, male champions, and context-sensitive leadership illustrated how learning unfolded. Caroline Paparu provides an example:

*And also watching the shifts in perception about women among the different participants. That for me was amazing. ‘Cause we had interactions where people often think gender is just women and women. But seeing the shift and seeing that some of the participants were beginning to appreciate that when we talk about gender it’s not just about women, but men too. Seeing that shift in perception and mindset – I think that was very beautiful.*

Intersectionality emerged – even during the preparatory phase – as a key conceptual and practical lens. Participants moved beyond binary understandings of “men versus women” to recognize how gender intersects with age, marital status, disability, refugee status, education, and power. Field work revealed that some women – particularly young, unmarried, or disabled refugee women, and also women with no formal education – remain profoundly marginalized, while others gain status over time through age, motherhood, or through different types of education. As Jessicah Apili, PhD student funded through AMUTI, based at BOKU University, puts it:

*There is a category of women who are still so marginalized. And these are mainly women within the refugee communities. Women who are not leaders, probably because they are not [formally] educated, those who are not married, and those relatively young. A combination of these categories predisposes them to further marginalization (...) For them to get privileges as a woman, they have to break some ceilings, either naturally as they grow older, or by educating themselves and becoming empowered to get out of the box.*

Transformative learning was especially evident among students. Many described AMUTI as their first exposure of participatory action research, qualitative methods, and gender-responsive inquiry outside the classroom. Within the summer school, students encountered households where women carried disproportionate workloads, lacked land ownership, or were excluded from water governance processes. This gave tangible meaning to concepts previously encountered only in theory. This “flesh on the bones” effect was repeatedly cited as pivotal, enabling students to rethink research design, methodology, and ethics, and to apply these insights directly to their own theses and PhD work. Denis Gobo, AMUTI affiliated PhD student, explains:

*My thinking has changed. I now need room for implementation of my thinking. If I am given an opportunity, or given what is already in front of me, my thinking has changed, it has broadened, and my thinking is not now like the traditional gender thinking.*

Importantly, learning was reciprocal. Community members were not positioned merely as respondents, but as co-collaborators. The participatory methods revealed practices such as women negotiating land leases, gendered labor expectations shaping marriage practices, and men’s withdrawal from roles in response to “women’s empowerment” narratives. These insights challenge simplistic empowerment models and highlight the necessity of gender-transformative approaches that AMUTI embraces, attempting to engage all genders and address underlying norms rather than reinforcing imbalances. Bona Maandera reflects on a meeting with a community member:

*When she talked about what happened to her and what she would do, even in saying she would want to go to school, I was so impressed! And I’m like, it’s probably from insights she gets from such a project that she wants to make a difference in her life. (...) So it invigor-*

*ates me to also put that support. Personally, that's what it is. And I think there's something similar in the other people, team members in MUNI and also the ones in the PALM Corps with whom we work together. That kind of tends to energize.*

The project also extended critical reflection inward, toward universities and institutional cultures. Participants emphasized that gender and intersectionality must be practiced not only in communities but within academic teams, teaching formats, and organizational structures. AMUTI's summer school, mentoring relationships, and collaborative spaces provided opportunities – particularly for Ugandan distance-learning students and European students – to engage in open dialogue, experiential learning, and collective reflection. These settings fostered a sense of responsibility that participants expect to carry forward into their future roles as researchers, educators, and practitioners.

Overall, AMUTI demonstrates that transformative learning begins at the personal level but has systemic implications. This reifies the importance of relationships. By embedding gender and intersectionality throughout project codesign, fieldwork, supervision, and community engagement, AMUTI continues to expand capacities and normalizes inclusive thinking, particularly in the personal relationships created, and hopefully beyond. As many participants noted, change does not start with policy alone, but with altered perceptions, relationships, and practices – within households, communities, and institutions alike:

*If I can say one thing, change always comes from the small, from the very personal level. Because, yes, we need policies and we need frameworks (...). But in a household or partnership, the dynamic, sharing or equality has to start there.*

Stefanie Lemke

## Realities of Managing Natural Resources

*So the project aims at finding ways [of] how to govern resources because there is this problem set behind it that resources are getting scarcer and this leads to tensions between the communities, not only between hosts and refugees but maybe even more so between refugees.*

Sebastian Fiebiger

AMUTI illustrates that managing natural resources in complex humanitarian and socio-ecological contexts requires a nuanced understanding of land tenure, gendered roles, household dynamics, and socioeconomic diversity. Success depends not only on technical interventions but particularly on fostering agency, co-learning, and empowering adaptive strategies that respond to the lived realities of both refugee and host communities.

Along these lines, the project provides deep insights into the complex realities of natural resource governance within refugee-host communities, revealing challenges shaped by land access, resource availability, knowledge, socioeconomic status, and the abrupt revocation of much international aid (in particular the abrupt halt of USAID, previously with a large presence in the region), exacerbating many of the already existing tensions around natural resources. Throughout all of these challenges, the relationships between and differences among the host and refugee communities remain central, as illustrated here:

*The host community who have large chunks of land, do traditional soil management practices of intercropping, rotations, and fallows. Unlike the refugee community who have small parcels of land and use their land intensively year in, year out, and so their yields are kind of lower as compared to the host communities. So this [knowledge] enabled me to understand the dynamics in the community and see that interventions are designed based on the needs of these two communities, the refugees and the hosts.*

Beatrice Sadina

This disparity regarding access to land and management practices resulted in differences in productivity and nutritional diversity, highlighting the necessity of tailored interventions for each group.

Limited land access, particularly for refugees and women, emerged as a persistent challenge. Married women frequently require permission from their husbands to cultivate land, and widows or those without male support risk losing access entirely, as illustrated by Amos Arima who spoke about

*the difficulties in access to land, especially by women, both hosts and refugees. It is surprising that even some women who are married still don't have access to land. They have to seek permission from their husbands before they can use land. It's even worse if you lose your husband, meaning you lose complete access to land and your in-laws*

*can actually throw you out of the land. So that's also something I discovered.*

These realities underscore that interventions cannot rely on assumptions or cookie-cutter tactics, but must consider intersectional vulnerabilities, household dynamics, and gendered labor burdens:

*And so oftentimes we think what works in one place can be applied in the other place, what we call one-size-fits-all approach. So my research has come to see that our interventions are specific, that our interventions are tailored to the different farming communities in the refugee and the host communities.*

Beatrice Sadina

Socioeconomic realities within communities further shape resource use and adaptation of improved practices, often with wealthier or moderately endowed households being able to interact with innovations more readily, while poorer households learn about practices indirectly through laboring for others. Soil fertility, pest prevalence, and crop health were also uneven, reflecting both environmental conditions and knowledge gaps among farmers:

*One of the key issues there was most of the refugees they don't have enough land. They were only digging in that land that has been given by OPM [Office of the Prime Minister]. And the second thing is, it is also a lack of knowledge. About how crops should be grown in the garden. They were also lacking knowledge. That's why (...) nutrients and the organisms were mostly not there [found] in the soil.*

Eunice Ondoru

Interventions providing soil testing and feedback contribute to more resilient cultivation, yet water scarcity and climate variability remain ongoing constraints:

*Some people they do grow some vegetables because you find that when they receive that seeds from the partners and they can be in position to grow that seed but it is not all much because there are some areas where there's no water.*

Wayi Wayi Cosmas, Community Actor

During the summer school, AMUTI also highlighted the interplay between local knowledge and external support. While improved seeds and agricultural guidance increased yields and resilience, fostering long-term, community-led management remains critical. Empowerment through knowledge sharing, cocreation, and university–community partnerships allow both refugees and hosts to actively engage in sustainable practices, seed knowledge exchange, soil management, and resource monitoring. Workshops conducted during the summer school with community actors on the topic of renewable energies highlight the strong connection to traditional techniques and practices that people associate with conventional forms of energy use, such as firewood. However, this also provided insights into people’s openness to new forms of energy production, such as solar energy. The fact that conventional forms of energy resources represent a basic income for many households and that the switch to renewables is usually associated with high costs poses a major hurdle to the transition to renewable energies.

Collaborative approaches applied within the summer school are seen as essential for enabling communities to take ownership of interventions, adapt to environmental challenges, and especially to build capacities independent of external aid:

*Basic services, public services, education, healthcare, also like everything around natural resource use and access is really challenging. And then with the funding cuts by USAID, it gets more and more challenging. So building long lasting capacities in the community that they don’t need support from outside would be best.*

Johanna Kristöfel

## From Field to Faculty – Sustaining What We Have Built and Looking forward

*I think what would remain is what people have learned now, in terms of what they can do for themselves (...) probably Muni University’s way of working with the community, going where the community are. I think that would remain.*

Bona Maandera

When the first summer school of the AMUTI project wrapped up, the participants already sensed that something more permanent than a short-term research stint was taking shape. At this point in time the project is gearing up for a second summer school in July 2026. In this case

it will have a focus on turning the data and reflections of the first summer school into concrete actions. The groundwork has already been laid: trust, humility, and a shared sense of purpose now bind students, faculty, NGOs, and the Siripi community. Participants repeatedly described how the immersive field experience turned abstract concepts into lived practice. As Sebastian Fiebiger puts it:

*Due to the tremendous splendid structure of the AMUTI project, we were able to in a very short amount of time build groups with people we don't know with different cultures, and it turned out to work very, very well (...) we were there for nine days, ten days? And this was very impressive to me. (...) we conducted research in a very short amount of time.*

That rapid cocreation revealed a central insight that has guided every subsequent discussion – the inseparability of natural resource management and the social fabrics that shape it. “Through AMUTI we discovered how essential it is to integrate social sciences with natural resource management,” notes Milena Klimek, based on the realization that any technical solution must be embedded in local norms and power relations.

The university itself has begun to feel the dynamics of this field-to-faculty flow. From the outset, Muni University’s leadership insisted that the partnership extend beyond community workshops to a reflective process within the campus walls:

*What was also important to us from the beginning was not to just go to the communities and do some work on gender intersectionality there, but to do the same at the university (...), because we also have to critically reflect on those structures and organizational cultures.*  
Stefanie Lemke

Students, too, have felt the shift. Amos Arima argues that the project’s impact would multiply

*if further engagements can have more field interactions compared to the classroom interaction. I think there is a lot to learn if given enough time; AMUTI can have a very big positive impact not only on students and on the community.*

Philip Omwene echoes this sentiment, describing his own transition from a laboratory-centric career to “a role that built learning from people who

are working with communities and being able to see projects (...) work.” These transformations, sometimes personal, have coalesced into institutional change. Clement Okia, AMUTI lead, recounts how a master’s program was established:

*The university has accepted, it’s now going to move to the next level. The title has changed to MSc Environment and Natural Resources (...) we borrowed a few courses from the BOKU curriculum. That will become institutionalized within Muni and will continue running for any other time to come.*

The adoption of participatory, qualitative methods – an approach that was novel to many faculty members – has also become part of Muni’s research culture. Abbey Anyanzo Thomas observes that the project now “pushes action research into our projects,” noting new initiatives already built on systematic assessments. The AMUTI team is aware of the potential of externally imposed solutions that evaporate once funding ends. As ZOA project officer Kennedy Arumadri states:

*I came to realize that some of the processes that partners [general research, NGOs, etc.] use (...) are not really community initiatives but just partner initiatives. (...) the project ends and the intervention ends there, so there is no sustainability for such issues because the community ideas were not incorporated.*

It is important to note here that AMUTI is not a development intervention, but collaborative action research that seeks to initiate and facilitate processes that last beyond the project duration. Cocreation, therefore, is not a buzzword but a safeguard. The next step is to embed community knowledge, needs, and aspirations into every activity, ensuring that ownership rests with the people who will live with the outcomes.

Looking ahead, the project partners envision a second phase – AMUTI 2 – that would transform the fragile network of relationships into a lasting ecosystem of learning and development. “My big picture is that whatever information we generate (...) we match up donors in Uganda that are addressing those areas (...) we hope this kind of thing results into projects that would help the community,” says Abbey Anyanzo Thomas. The aspirations are concrete: a fully equipped soil testing laboratory for the community, a community solution to water management, regular trainings on garden management, solar cooker repair and sustainable fertilizer use, and a standing committee or center that can receive ideas or

needs and mobilize students and faculty to act. Finally, we aim to do this in a way that considers gender equity, a central aspect that emerged as a necessary pillar of future work. Caroline Paparu urges that “more women get involved in such groups (...) to build a movement and have a voice in the community because they are the ones that suffer the most.”

The narrative that began with an email from one professor to another has now branched into a story of institutional transformation, personal growth, and a collective resolve to keep relationships alive. As Lorenz Probst puts it, the most enduring legacy will be “the relationships between the people that have been created (...) the links between the master students and the PhD students, between the PhD students and the communities and NGOs, and knowledge will be created along the way.” The hope is that AMUTI’s impact will continue to ripple through curricula, research designs, policy dialogues, and, most importantly, the lives of all project members and refugee-host communities long after the project has ended.

## Conclusion

Through the AMUTI project narrative, we have illustrated the depth, breadth and realities of various levels and strengths of relationships built or reinforced. Some of these realities are deeply personal and will impact the life choices of individuals in the future. Other realities show a larger, systemic influence, now and in the future. AMUTI is based on its strategic, natural and social-science-based project framework, structured by APPEAR. Within this project structure there are traditional project causalities between activities and impact in relation to systemic change. However, intertwined in AMUTI’s roots, and laced throughout the project and connected to its progress, are its deep relationships between actors.

In this chapter we share a reflection and a call to understand and make aware of the relational perspective. This highlights the importance of these relations, in a way that is often overlooked or undervalued in international project work. Such relationships, although hard to track their numerical impacts now and beyond, create layered rippling effects immediately to well into the future. These relationships also have the potential to create foundations of collaborations with other current and future projects, enabling regional, national, and global systems of trust. Building such relations may take years, but can be found and reinforced in other transdisciplinary projects.

With this deep-rooted insight into the complexities of relationships in just one project, we propose to rethink the role of human relations in fostering sustainable development and institutional growth. Change can also be relational, not only linear. And what could future project designs and outcomes look like if designed for relationships (rather than solely dissemination of solutions) and monitored for change in ways of relating (rather than only adoption)? Our AMUTI narrative has brought to light how we have been affected and changed personally and systemically through our relationships developed and strengthened in this project. It has shown us that iterative cycles of engagement can foster the evolution of relations in such powerfully positive ways that it too must be considered a major impact and outcome of projects. Perhaps the relational perspective needs to be recognized and even required differently in order to understand and monitor project success and lasting change for the future.

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