



National
Research
Foundation

ENGAGED RESEARCH FRAMEWORK - CASE STUDIES

EMBRACING SOCIETAL PARTICIPATION AND COLLABORATION

2023

FOREWARD

AN INTRODUCTION TO ENGAGED RESEARCH

The National Research Foundation's (NRFs) Vision 2030 focuses the organisation on 'Research for a Better Society' and underpins the organisation's long-standing commitment to the role of science within society. The NRF is mandated to support and promote public awareness of, and engagement with, science.

What's more, science systems across the world are increasingly recognising the importance of the broader societal impact of research, which includes the interdependent dimensions of social, economic, and environmental impact.

Engaged research is an approach that involves public engagement as part of a participatory process and can enable collaboration and consultation with a wide range of societal actors including society, academia, government, and industry. The nature, extent and timing of engagements within the research process will be influenced by the type of research being undertaken, e.g. basic or applied, in its field and disciplinarity, e.g. intra-, cross-, multi-, inter-, and trans-, of its approach.

The NRF's support for embedding an engaged research approach is the result of national and international shifts in knowledge production, the role of universities as public institutions, the nature of the relationship between science and society, social responsiveness, societal impact, and others.

In addition, the Department of Science and Innovation's 2015 science engagement strategy indicates the need to develop a critical public that actively engages and participates in the national discourse of science and technology to the benefit of society.

The NRF has established five key principles of Engaged Research that can be embedded across the full cycle of research.

PRINCIPLE 1: ACTIVE CITIZENSHIP

Engaged Research is driven by the active citizenship of researchers and research institutions for the common good of humanity, through (co)production of socially inclusive and robust knowledge that is anticipatory, inclusive, responsive, and reflexive to the needs, challenges, and aspirations of society. Unlocking this active citizenship of researchers and research institutions requires integrated resourcing and capacity development approaches.

PRINCIPLE 2: RECIPROCITY

Engaged Research approaches that are guided by principles of reciprocity for mutual benefit, genuine and equal standing amongst all actors, and pursuing a knowledge (co) production approach that builds capacity and capability in communities along the research value chain, towards a strengthened knowledge democracy. These principles are informed by a shared philosophy of Ubuntu, which incorporates the values of trust, honesty, empathy, and accountability.

PRINCIPLE 3: TRANS- AND INTER-DISCIPLINARY KNOWLEDGE PRODUCTION

Engaged Research encourages trans- and interdisciplinary knowledge (co)production driven by researchers from diverse academic disciplines while also being cognisant of the need for active transformation towards inclusive and sustainable economic growth and development. This will foster a systematic, multi-perspective approach that will enhance Engaged Research towards more impactful deliberations between researchers and communities.

PRINCIPLE 4: ETHICS AND SUSTAINABILITY

Engaged Research is governed by ethical standards that are applicable across academic disciplines; relevant to the social engagement processes throughout the research lifecycle; and act towards the intent of beneficence (do good) and non-maleficence (do no harm) within the interdependent dimensions of a triple bottom line, including people, planet, and profit. Engaged research seeks to ensure the sustained longevity and transferability, across multiple contexts, of the desired beneficial impact of research, while ensuring that all participants, through a process of informed consent, have an unconditional right of withdrawal.

PRINCIPLE 5: RELATIONSHIP BUILDING

Engaged Research requires relationship and partnership building (initiated prior to research being conducted and is sustained downstream of knowledge production) over an often-extended period towards a long-term and future-oriented vision. Engaged Research requires capacity building throughout the full research value chain, which is retained as a basis of future engagement.

Given the critical role of the NRF in ensuring that science is trusted, valued and an essential component of society, the adoption by the NRF of Engaged Research will better position the organisation to execute its mandate in supporting, promoting, and advancing research for greater societal benefit and knowledge impact.

CONTENT OVERVIEW

In this engaged research booklet, we have published commentary and findings by South African academics on a variety of subjects, with one important common denominator - the research involves engagement with broader society.



Dr Tracey-Ann Adonis of the Department of Psychology at the University of the Western Cape weighs in on the need for trauma support for teachers in under resourced schools.

Feedback provided by hundreds of young mothers and clinic staff working and living in informal communities to a research project on the benefits of breast feeding an infant until it is six months old is the subject of the article presented by **Dr Ellenore Meyer**.

Macdonald Rammala is a qualified lawyer, mediator and social worker who constantly returns to his roots as an engaged researcher, observer, and project leader. His research overview focuses on the people-centred participatory research project launched in 2017 to regenerate community knowledge for dispute resolution

in the South African context, and to intertwine it where possible with the formal legal system.

Aziza Kalam's doctoral thesis research on the growing impact of non-communicable diseases on people's health was conducted in Fisantekraal, an informal settlement near the Cape Town suburb of Durbanville. The area is characterised by poverty, unemployment and high levels of substance abuse. Her review details how members of this community contributed to the research findings.

Professor Eduard Fourie of UNISA's Department of Psychology explains how the principles of community psychology anchor efforts to connect with people inside correctional facilities, and the communities that support them.

The University of Zululand's Head of the Department of Consumer Science, **Professor Unathi Kolanisi**, explains how local smallholders who harvest amaranth (an ancient grain) influenced and shaped her interest in the use of indigenous knowledge to foster food security.

Professor Kolanisi also reviews the concept of Umholiswano (stokvel) and how it has been part of the life of many indigenous communities before the money era. It was used to achieve social justice, establish peace and create socio-economic balance and improve the well-being especially of people who stand outside of the formal economy.

The Building Bridges mentoring intervention, rooted in Erijaville in the Strand, Western Cape, was started in 2014 in response to high levels of violence in the area. The programme was born out of **Dr Naiema Taliep's** PhD studies that identified the need for a youth intervention to address crime in the area.

Theory of Design lecturers from CPUT, **Ryna Cilliers and Lara Nieuwenhuis**, understand that children's voices are all too often not heard when research for resilience planning is done, or when projects to support communities are conceptualised. Their research study explains how children's artwork provides a valuable window into how they see their surroundings, and especially the places and spaces that they play in.

A former lecturer in industrial design at CPUT, **Hester Claassen**, outlines the importance of input from multiple stakeholders in participatory design, following a study on a wine farm that sought to highlight the importance of considering the end user when designing an app.

The achievement of the NRF's vision of 'Research for a Better Society' supports the need integrate considered approaches to engaging communities and society in research. This serves to strengthen the delivery of excellent research that results in societal and knowledge impact.

The ten research report overviews that have been presented in this document support the importance of societal involvement in research activities and serve as a motivation for more of this sort of research.

Students and nine teachers met online each week for the better part of six months. Through semi-structured interviews, the educators willingly shared their experiences and emotions. Together they dreamt about optimal educator wellbeing and support in low socio economic schools.

At the end of 2020, after months of screentime, the students and participating educators joyously met in person for the first time. Staff were touched when the students gifted them with a coffee machine.

“Having a communal place to share a cup of coffee is a way of connecting and sharing with colleagues. The teachers couldn’t do that during lockdown or when they initially returned to the school,” Dr Adonis explains.

The project is continuing. According to Dr Adonis, a masters student is now working with parents to explore how they perceived their children’s wellbeing during the strict lockdown. Another student conducts focus groups with educators to facilitate a space where they can debrief specifically around violent encounters in the school.

“It’s important to ensure that such a space exists and that the necessary referral processes are in place,” says Dr Adonis.

A suitable intervention for educators will be piloted later in 2023.

“Navigating this time in our history is significant and relevant. The sustainability of the workforce in schools and the subsequent quality of education depends on it.

“Teachers fulfil a huge function in the lives of children. They spend hours together every day and if they are overburdened, it will have an effect on their learners too. Any impact on teachers as primary beneficiaries of this intervention will inevitably reflect on the quality of education they provide to their learners,” notes Dr Adonis.

“This project exposed our younger students to data gathering, literature reviews and the ethics behind research,” adds Prof Maria Florence of UWC’s Department of Psychology.

“Our community liaison always makes sure that when we go into the community to do research, we give back - preferably more than we take,” she notes.

A SHOULDER TO LEAN ON FOR TEACHERS IN UNDER RESOURCED SCHOOLS



Early one morning a man was shot in a gang related incidence at the entrance gates of a Cape Flats primary school. Teachers jumped in to comfort and council their learners, and to be a safe space for them.

But who debriefed the educators afterwards?

It never happens.

Teachers are also not helped to process the stories of trauma that their learners entrust them with, or their experiences when visiting the home of a child who has been absent from school for too long.

This stark reality struck Dr Tracey-Ann Adonis of the Department of Psychology at the University of the Western Cape (UWC) during the 2010s when she was completing her PhD in Science Education. She held numerous small-group discussions with teachers from one particular impoverished primary school in the Cape Flats. Thanks to their insights, she developed and tested a stress management intervention for teachers working in under resourced schools.

“Sometimes the teachers failed to really think about how experiences truly impacted them too. In only a few cases would someone mention that things were getting too much for them, that they couldn’t anymore,” she remembers.

The poor socio-economic and often violent surroundings where they worked were not the only stressors they faced. Teachers often felt that the curriculum and teaching time were lost in the struggle to meet administrative demands. Many suffered burnout.

When the Covid-19 pandemic struck, traditional education came to a halt, as did the daily feeding programme that many children depend on.

“The COVID-19 lockdown period placed extraordinary responsibilities on the shoulders of already burdened educators. The need to keep learning going within a state of disaster, without adequate resources while still placing children first was especially difficult within under resourced communities,” Dr Adonis says.

She worried about the educators with whom she had come such a long way. Therefore, she involved three psychology honours students in a new research project to explore primary school educators’ perceptions of their wellbeing during this period. It was loosely based on relevant literature and Dr Adonis’ previous PhD work.

YOUNG MOTHERS EMPOWERED WITH INFORMATION ON BREASTFEEDING

A young mother walks down an alley in the informal settlement of Cemetery View, her baby on her back. Her blue T-shirt displays a logo saying: "Together we protect breastfeeding".

The woman had visited her pregnant friend. She had shown the soon-to-be-mother an informative breastfeeding video that guided expecting mothers through the process of expressing and storing breastmilk in Shona. It also had English subtitles.

"The tips in the video on how to express your milk into a cup will be handy whenever you must be away from your baby," she told her friend. "You do not need to feed your baby any food, drinks or water except breastmilk for its first six months. Then only do you need to start giving you baby family food. From then onwards you can breastfeed in between until your baby is two years and older."

The professionally produced YouTube video reflected the realities of young mothers in informal communities during the Covid-19 pandemic. It was produced in response to calls by mothers from settlements in Pretoria East and West for culturally appropriate educational material in Shona.

This resulted in a community-driven multi-disciplinary research programme funded by UNICEF, ONE HEALTH and the University of Pretoria (UP) over a four-month period. Dietitians, nursing staff, a doctor and experts in human nutrition from UP's School of Health Sciences were involved.

The content was developed by a certified lactation consultant, Elmari Goldenhuys, and Community Oriented Primary Care (COPC) community health workers.

Feedback was continuously sought from hundreds of young mothers and clinic staff working and living in the informal communities to ensure that the final product was on target.

The project's colourful logo was also meticulously designed thanks to input from community members.

By 2023 the video was already viewed more than 1100 times, and shared and used among young mothers, clinic staff and students working in local communities.

Dr Heather Legodi, head of UP's Department of Human Nutrition, says breastfeeding exclusively is internationally recognised as a cost-effective public health measure that greatly improves the health and well-being of growing babies.

The national goal is to ensure that 75% of all babies are breastfed exclusively until they are 14 weeks old. It currently stands at 32%.

"Given the limited healthcare resources in South Africa, effective breastfeeding promotion and support interventions that are easily replicable in various settings is a priority," says medical doctor Ellenore Meyer.

Women from the community were used in the video. A mother-daughter team did the voice-over.

By involving women who understand the cultural context the intended recipients of the information shared were empowered. Their involvement wasn't just primarily about research, but to inform and support them, and to enable support within their communities.

"By repeatedly sourcing valuable, credible information from mothers themselves we could better implement new material in the communities we work in," adds Dr Meyer.

The product was eventually launched with an educational drama scripted together with a local drama group from the Melusi Youth Development Organisation (MEDO).

Dietician Marion Beeforth from the COPC research unit says a sewing project was also started by Stitch Witch Nicki Shelby for young mothers in Cemetery View. They learnt how to make so-called "kangaroo pouches" to tie around themselves while breastfeeding.

Members of the initial project group are taking the initiative forward. Well-Being Africa, with CEO Debbie Kupolati, has presented a three-day breastfeeding course to 300 community

health workers and more than 30 nursing staff. UP's Future Africa helped to start a support group for mothers in Mpumalanga. UP researcher Dr Carmen Muller developed a complementary feeding booklet to support the outcomes of the video, in partnership with Potatoes South Africa and the National Research Foundation Chair in Nutrition and Food Security.

A renewed focus is being placed on breastfeeding and HIV transmission. Prof Ute Feucht, director of UP's Research Centre for Maternal, Foetal, Newborn and Child Health Care Strategies and of the South African Medical Research Council's Maternal and Infant Health Care Strategies Unit, says the transfer of the HIV virus during the antenatal period now occurs in fewer than 1% of cases. This is thanks to South Africa's HIV Prevention of Mother-to-Child-Transmission project.

The next frontier for risk reduction is during the breastfeeding period. Breastfeeding mothers should be regularly tested and if tested positive receive antiretroviral medication to ensure their good health, and that of their baby's.



Video provides valuable lessons about breastfeeding

LEARNING FROM LEKGOTLA

The sound of a kudu horn calling elders and community members to the traditional lekgotla court in the rural village where he grew up in has from a young age resonated with Mr Macdonald Rammala.

Sitting in the dedicated hut, listening to how disputes and transgressions are handled, instilled a love for the law in him. Today this qualified lawyer, mediator and social worker constantly returns to his roots as an engaged researcher, observer, and project leader of the Lekgotla La Batho: Regenerating Community Knowledge for Dispute Resolution in the South African Context project, under Unisa's College of Law.

The ongoing people-centred participatory research project, launched in 2017, aims to regenerate community knowledge for dispute resolution in the South African context, and to intertwine it where possible with the formal legal system. It is run in 32 villages around Makapanstad in North West Province that falls under the traditional leadership of the Royal Makapan family.

Although it stands outside of the country's formal court system, decisions made by traditional courts are recognised by the South African Constitution. Disputes about rulings can be escalated to the Constitutional Court.

The Lekgotla La Batho research project is about rediscovering distinctly South African ways of dispute resolution, about learning from them and about designing specific policy solutions, strategies and projects that benefit community participants and society. It is built around an African Harmony Model for Dispute Resolution.

Mr Rammala hopes his work will help younger people again embrace the value of customary practices - just as he had as a youngster while he listened in on how matters such as cattle theft, dissolved marriages or land grabs were resolved.

These days, wearing his researcher's hat and documenting such proceedings, he believes that South Africa's formal court system can learn from traditional courts, especially on how to use mediation to resolve conflicts.

"If the formal legal system turns to mediation more often to resolve issues, it can help relieve the high burden of cases before our courts.

"Traditional courts are not just about serving punitive justice, but also about ensuring restorative justice through mediation. This embraces Botho or Ubuntu, and strives to create a dialogue so that issues at hand can be resolved," explains this expert on community law.

"Seeing this in action encouraged me to study further to become a mediator too," he adds.

His observations have so far also led three scholarly papers, as well as presentations at symposia and conferences. In a paper in the International Journal of African Renaissance Studies, he illustrated how the interrelations between lekgotla and idiomatic expressions constitute a complex process which aims to bring families together to negotiate, confess, forgive, compensate, heal and engage in a ceremony that restores harmony in the community.

"This interconnectedness is highlighted by a Setswana idiom: 'Mabogo dinku a thibana'. It means 'working together, we achieve more'. This emphasises the mutual support that the community enjoys when tackling issues."

For Mr Rammala, Lekgotla La Batho is an action-based research project which is about more than research itself. Knowledge holders from respective communities are the main participants and beneficiaries.

Workshops have been offered to the people of Makapanstad by Unisa's College of Law and the Bakgatla Ba Moseletlha Traditional Council. Among those present were King Nchaube



Lekgotla La Batho is an action-based research project which is about more than research itself. Knowledge holders from respective communities are the main participants and beneficiaries.

Makapan III, Traditional Council members, community youth and learners. Experts in dispute resolution, community policing and criminal justice were involved.

Topics covered included aspects of customary marriages and other marriage regimes, community dispute resolution and human rights, and how these play out in terms of traditional court systems, or within the context of the Constitution.

The learning taking place at these events is processed and documented into research reports so that academics can enrich syllabuses with community-gained knowledge.

"These workshops provide much-needed knowledge on legal developments in relation to traditional courts. They provide updates to broader policies in relation to issues which people face daily, such as the Wills Act and Marriage regimes.

"It puts the principles of 'Batho Pele' (People First) into action," he believes.



FACILITATING WOMEN TO TAKE ACTION TO PREVENT CHRONIC DISEASES

Her own family history of non-communicable diseases (NCDs) such as high blood pressure, heart failure, high cholesterol and obesity provided the impetus for Ms Aziza Kalam's interest in developing an awareness programme for women around the issue.

Ms Kalam, a lecturer at the University of the Western Cape, started her career as an occupational therapist focusing on children. Her work in local Cape Town communities made her aware of the growing impact of NCDs on people's health.

In South Africa, more people die from NCDs than from HIV and tuberculosis combined. The situation is especially dire among the poorest of the poor. Numerous studies have highlighted an exponential rise in NCD cases globally - most of which are preventable if people could make specific lifestyle changes.

"The management of these diseases and their symptoms place a huge financial strain on our healthcare system. I believe occupational therapy and its core concept of occupational engagement could be key to facilitating better health and well-being," says Ms Kalam.

In 2015, as part of her doctoral studies, she embarked on a tailored research project to develop and implement an occupation-based community development programme for women in the Western Cape.

The project was run in Fisantekraal, an informal settlement near the Cape Town suburb of Durbanville characterised by poverty, unemployment and high levels of substance abuse.

During the initial data gathering and observation phase, women between 20 and 65 years of age served as voices for others in the community about their perceptions on NCDs and their current health-risk behaviours. They were asked what they did to keep busy, about their needs in terms of occupational participation and activities, and what they believed was needed to make it happen.

By using the photovoice method, participants became actively involved in the data collection process. They took photographs of their daily activities. Additionally, three key informants were interviewed, and four focus groups conducted.

"The focus groups allowed the participants to reflect on the findings of the data collected from the interviews, and to prioritise their collective needs in terms of enablers for occupational participation."

The women expressed a need to learn more about diet, exercise, food gardens and crafts such as knitting. They felt it would give them a chance to be creative and express their individuality while producing clothes to wear or to sell. They also felt a need for support groups in which they could discuss their human rights or find motivation to focus on exercise and maintaining a healthy diet.

After further workshop sessions, a six-month long intervention programme was implemented. An action-reflection learning cycle followed each session that empowered women to choose and participate in activities that could improve their health.

They received sessions with dietetic students and learnt how to start food gardens and manage their money. Through workshops, they were taught more about their human rights, exercise, self defence, and the making of income generating crafts and handiwork.

"After each activity participants reflected on what they had learnt, to help them identify learning that could realistically be used if they wanted to make changes in their lives to prevent NCDs," says Ms Kalam.

"Most participants made changes to their diets, by for instance reducing their sugar and salt intake, choosing fresh fruit and vegetables rather than processed food, drinking more water and trying to eat smaller portions. They increased their levels of physical activity while cleaning their houses or gardening. Some even started a small walking group together.

"The women's biggest enabler proved to be their strong faith and spirituality which motivated them to continue making lifestyle changes despite the many daily stressors they faced," Ms Kalam reflects.

She says critical occupational therapy and occupation-based community development are relatively new areas of practice in South Africa.

"The Fisantekraal project that was completed in 2019 contributed to our knowledge of the role that occupational therapy can play in community development practice and the prevention of NCDs," she concludes.

CONNECTING WITH COMMUNITIES IN SA'S CORRECTIONAL FACILITIES

People often shun family or friends who find themselves behind bars. However, that cannot be said about members of the countrywide Inside-out Outside-In South African Corrections Interest Group, that has been driven by UNISA's Department of Psychology since 2013.

"We're a loose, inter-disciplinary grouping of South Africans interested in issues related to corrections. We share knowledge and experiences about projects, organisations, research, and theories," explains project leader Prof Eduard Fourie of UNISA's Department of Psychology.

The Group was started by UNISA staff and students, within the context of the University's long history of offenders and ex-offenders enrolling to complete qualifications. This includes MA and PhD degrees - the highest levels of academic achievement for students. Graduates in the Department of Psychology, for instance, often draw on their personal experiences and that of others serving correctional sentences for their research.

The principles of community psychology anchor the team's efforts to connect with people inside correctional facilities, and the communities that support them, such as officials, offenders, ex-offenders, their families and home communities. This effort includes local and international stakeholders in the correctional environment, such as the Department of Correctional Services, the Judicial Inspectorate for Correctional Services and the Incarceration Nations Network.

"There's real value in engaged dialogue. It has strengthened our efforts to connect communities on the 'inside' and the 'outside,'" says Prof Fourie. "Through a collaborative, bottom-up approach we actively engage with the communities we serve. Our initiatives cross the boundaries between the inside and outside of correction facilities, and deal with the connections and inter-dependencies between people, inside and out."

Examples are the facilitation of expos about tertiary education and career opportunities for offenders, as well as correctional officials; projects and studies that focus on issues of social reintegration and recidivism after release; and issues relating to the families and relatives of offenders. Knowledge about correctional experiences and circumstances are also generated and shared collaboratively.

The Group values "research with a purpose".

Recent postgraduate students have researched the lived experience of offenders enrolled in an open distance and e-learning (ODEl) university, mothers who commit filicide, and the issue of punishment. These have led to submitted journal articles, as well as webinar and conference presentations.

"Our studies, and those of our postgraduate students, focus on research within and around the carceral community that is co-



operative, ethical and empowering. Most importantly, our research seeks tangible outcomes."

Several projects sprung up through such engagement with offenders and officials. These include support groups such as the Fatherhood Project and the Spirituality Project at the Zonderwater Correctional Centre in Gauteng, and the Teacher Support Programme at the St Albans Correctional Centre in the Eastern Cape.

The Inside-Out Books Project started after inmates raised the need for more reading material in the libraries of correctional centres. Since 2017, a few thousand books of all genres have been donated and delivered across South Africa.

"Books allow offenders to participate in the world of civil discourse, ideas, learning and imagination from which they are physically excluded. Books have the potential to morally and intellectually elevate offenders above their confined circumstances and to prepare them for a life after incarceration," says project member Dr Mbongiseni Mdakane.

Dr Bianca Parry, also of Unisa, regularly updates news about the Group and its partners on Facebook (<https://www.facebook.com/insideoutoutsideinproject/>) and its Wikipage (<https://sites.google.com/view/insideoutwikipage/>). In 2018 the team was runner-up in the Best Digital Humanities Project for Community Engagement category of the South African Humanities and Social Sciences Awards.

"Social media and other methods of digital communication create valuable dialogue that breaks down barriers of exclusion and engagement," says Dr Parry.

The digital sphere helped the team to maintain contact during the Covid-19 pandemic when face-to-face visits to centres for research purposes and related endeavours came to a halt. Group members connected via webinars. This included a series on minority voices such as the aged, the disabled, and women in correctional service.

"It is vital to recognise the agency of the correctional community, as they are particularly vulnerable as an isolated population, literally existing on the margins of society," says Prof Fourie.

DEVELOPING A NEW TASTE FOR AMARANTH

An elderly woman from Mtubatuba once visited the University of Zululand (UniZulu), armed with homemade breads that she had baked using amaranth leaves as an ingredient. She wanted an expert opinion on whether her baking had any real nutritional value.

Fakazile Mthethwa (or Gogo Qho, as she was also known) was referred to Unathi Kolanisi, who back then had just recently joined UniZulu as an associate professor and head of the Department of Consumer Science.

Prof Kolanisi, now a full professor, still fondly remembers how, since the mid-2010s, her subsequent relationship with Gogo Qho and local smallholders who harvest amaranth evolved. It has strongly influenced and shaped her interest in the use of indigenous knowledge to foster food security.

These days, her research team is known for their work on indigenous foods and how they incorporate these into new, tasty recipes.

Her motto is: "Let's use familiar ingredients, but in new, modern ways."

Amaranth is a group of ancient grains, similar to the more widely known quinoa. Some tip it as the "next big thing" in producing climate-smart food.

"It is a good ingredient to fortify food with, as it contains fibre, protein and nutrients such as iron," Prof Kolanisi notes.

However, studies among young people found that they are not overeager to eat it because of the lack of variety in how it is served.

"It is generally only served as a relish made with tomatoes and onions," notes Prof Kolanisi.

There's also some stigma attached to it as some people call it a 'poor man's food'.

"From our community engagement we learnt that people often will only eat it as a last resort when no store bought food is available. Its value is not appreciated by the younger generation."

Her research team has over the years produced a round biscuit, a savoury rusk to dip into soup, amaranth bread, a pesto and noodles. A research paper reporting on the nutritional value of the latter product appeared in 2022 in the South African Journal of Botany.

The name of the biscuit, "Imbuya Umfino – On the Go" means "Eat it on the go" in isiZulu, as people can enjoy it as a quick snack.

"We are now working on a low-gluten biscuit that you'd be able to eat with soup, as an alternative to bread. I've used it as a base to make cheesecake," Prof Kolanisi mentions.

Consumer scientists gain valuable insights when they include community engagement and participatory research when developing new products.

Prof Kolanisi's team therefore always tests their recipes on people to learn whether it is tasty enough and has attributes such as a long enough storage life that is acceptable to consumers.

"Whenever we let people try out a new product, we ask them whether they still recognise the core of the product, and its ingredients.

"We actively learn from community members. You could say that our consumer science lab is not only in



the kitchen, but also in the community."

Her team, which includes a local caterer, La Fusion Chefs, has taken their products to many exhibitions and on road shows. Informal tastings at such events also provide valuable public opinion. Their work has featured in newspaper reports and in television shows, as part of efforts to enthuse renewed interest in amaranth as a foodstuff.

The project recently received new funding for two postgraduate students to pursue the development of a premix flour containing amaranth with which to prepare breads, rolls or frozen dough.

"We hope our efforts eventually help to create a market for smallholders who farm with amaranth," she says.

Some smallholders were therefore included in workshops to ensure the quality of their produce. Community members who shared their recipes and farming practices were also included in workshops about the management and protection of the intellectual property rights of indigenous knowledge. These were held in conjunction with the Southern Africa Network for Biosciences (SANBIO), the Council for Scientific and Industrial Research (CSIR) and the Centre for Indigenous Knowledge Systems at the University of KwaZulu Natal.

STOKVEL: FOR THE PEOPLE, FROM THE PEOPLE

Thanks to her participation in a stokvel, Unathi Kolanisi's mother had enough money ready to kit her daughter out for university. Today she is a full professor in the Department of Consumer Science at the University of Zululand. Stokvels are still part of her life - both as a personal form of saving, and as a research topic.

The concept of Umholiswano (stokvel) has been part of the life of many indigenous communities before the money era. It was used to achieve social justice, establish peace and create socio-economic balance and improve the well-being especially of people who stand outside of the formal economy.

Today, it is still a common practice among women with an entrepreneurial spirit and a budget to stretch, wanting to make the most of what they have.

"Umholiswano is a household financial planning and management tool, saving/investment system, a social-cohesion-nurturing and therapeutic mechanism that is founded on six core value principles: ubuntu, trust, solidarity, dignity preservation of social wealth and ukudlala (fun)," is Prof Kolanisi's academic summary of it.

One of her honours students, Andile Mthembu, and a Swedish visiting student, Helin Bäckman Kartal, has a better soundbite ready: "Umholiswano is the 21st livestock for women."

Mthembu was lead author of a paper about the value of stokvels, along with Prof Kolanisi and others, in the



African Journal of Gender, Society and Development in 2022. It sets out findings from a three-year project ending in 2023 and funded by the South Africa Sweden University Forum (SASUF) and focused on aspects of consumer science, the understanding of indigenous knowledge systems, social innovation and entrepreneurship. The study was initiated to increase current information about the practice, and to document it more comprehensively.

In practice, it set out to help participating women diversify their income and optimise their stokvel cash. By enhancing their skills and developing them into entrepreneurs, the research team hoped they would be able to afford more nutritious food and meet other needs. In addition, a sewing project, Siyaphambili, was started and participants were introduced to other organisations that could provide support.

"Through our social entrepreneurship innovation project, we are teaching project participants to make items that appeal to a

younger generation, and to make uniforms with a distinctively Northern KwaZulu-Natal identity," Prof Kolanisi elaborates.

The initial sewing machines were bought by the women themselves after they received their training, while the project's Swedish partner, Prof Elise Dermineur Reuterswärd, also bought them two industrial machines. Products are already being sold at a local market.

"This year we collected clothes and gave the items to the women to share in their community in the spirit of Ubuntu," says Prof Kolanisi. "We want to promote ownership, development and the sustainability of projects we initiate."

Communities are often research fatigued and their knowledge exploited. They have been undervalued as co-partners in the past. Therefore, right from the start, community engagement was structured around the idea that participants are co-researchers. The interactive process was convergent of a bottom-up and top-down approach.

The project's academic purpose was to document more information about Umholiswano, and to add a stronger social sciences base to this knowledge. To develop a quantifiable tool to assess the contribution of umholiswano to a system, the team asked 65 women involved in 22 stokvels in and around Hluhluwe in Northern KwaZulu-Natal what value and meaning they gained from participating. Focus group discussions were conducted, as well as six key informant interviews.

"This process of measurability started by identifying indicators designed 'with people and for the people'. These, along with the six core value principles of what a stokvel is, guided the framework we used to develop the tool," Mthembu explains.

"Despite their challenges, there's no doubt that stokvels are helpful as a local-based economic development strategy to buffer poverty."

The science behind it is informed by human needs, a concept that goes back to the principles of a hierarchy of human needs by the American sociologist, Abraham Maslow.

"We've learnt that one learns by being part of the learning process, and learning with the process."

INTERVENTION AGAINST VIOLENCE BUILDS BRIDGES

The Building Bridges mentoring intervention, rooted in Erijaville in the Strand, was started in 2014 in response to high levels of violence in the area.



Since then, groups of 75 young men and women (as mentees), and 55 adults (as mentors) have been guided every year over a nine-month period through self-development workshop activities. They are taught about building positive relationships and how to stand together to create safer, more peaceful communities. Positive attributes of their gender identity, such as loyalty, perseverance, dedication and humour and positive fatherhood, are boosted.

Building Bridges draws on the spiritual capacity and religious assets within each participant, and their immediate community.

“The programme has been rolled out to the communities of Nomzamo, Sir Lowry’s Pass and Strand in the Helderberg basin, and to Worcester in the Breede River Valley,” says project leader Dr Naiema Taliep of Unisa’s Institute for Social and Health Sciences (ISHS), the South African Medical Research Council (SAMRC), and Unisa’s joint Masculinity and Health Research Unit (MaHRU).

The need for an intervention programme for Erijaville’s youth arose from Dr Taliep’s PhD studies within the Spiritual Capacity and Religious Assets for Transforming Community Health by Mobilising Males for Peace and Safety (or SCRATCHMAPS)

participatory project, which was run by ISHS-MaHRU from 2011 to 2016.

She led the writing of the intervention material, which was reviewed by input of experts and community members.

“Such preventative interventions are much needed, as rates of interpersonal violence in South Africa are five times higher than the global average. Men are most often either the victims or the perpetrators of crime,” says Prof Mohammed Seedat, also from Unisa.

The research-infused project started with a data collection phase conducted jointly with Methodist Le Bonheur Healthcare Hospital in Memphis in the USA.

“It’s heartening that people have taken ownership of the Building Bridges intervention to such a degree that a non-profit organisation with the same name was subsequently established in 2016,” says Prof Sandy Lazarus of Unisa-SAMRC’s Masculinity and Health Research Unit.

This has ensured the intervention’s long-term sustainability - an issue that was built into the SCRATCHMAPS project from the start.

“Sustainability is an important consideration when conducting research with communities. You don’t want ‘helicopter’ research that is more extractive than transformative,” adds Prof Lazarus “Good relations and active consultation with communities in which projects are situated ensures the success of an intervention or research project. To have a successful university-community partnership, there must be mutual beneficence.”

The further roll-out of Building Bridges to other communities is guided by an impressive “how to” 500 page manual inspired by research and practical community work.

Its foreword sheds light on how the curriculum was developed through the active input by the people of Erijaville about their needs:

“The road travelled to develop this impressive Manual for the Building Bridges Mentoring Programme has been long and filled with deep commitment and creative engagement... Each page holds a cauldron of insights, innovative knowledge, educational expertise and, above all, compassion - reflecting the values that are embedded in the programme. Moreover, the multiple consultative activities that accompanied the co-construction of this resource speak to the deep commitment to an engaged community-based participatory process.”

Those involved still fondly remember the very first formal meeting between the SCRATCHMAPS research group and Erijaville residents on a warm night in the Rusthof Primary School hall.

Ten community members were initially chosen to provide oversight as the project’s community advisory committee.

“The committee was guided by an open-door-open-chair policy, and soon expanded to around 15 members,” says Dr Taliep.

For more than five years, the committee and the research team met monthly to take stock of activities, provided insights, and make decisions. The researchers also met weekly with its community research team, comprising 10 local unemployed people who were selected jointly by the advisory committee and the ISHS-MaHRU team.

Building Bridges workshops were presented and an interfaith peace march was held against crime and violence.

Twenty journal articles and eleven book chapters have since been published.

“SCRATCHMAPS was guided by the values and principles of Community-Based Participatory Research (CBPR). Community engagement occurred from the ground up, and throughout the research process, with a participatory evaluation framework being key,” Prof Seedat remembers.

“CBPR as an approach to research constitutes a world view that is congruent with a participatory, holistic, systemic, and relational paradigm. Knowledge is generated by partners within a critical perspective,” concludes Prof Lazarus.

CHILDREN'S ART "SPEAKS" ABOUT HOW THEY PLAY

Children's artwork provides a valuable window into how they see their surroundings, and especially the places and spaces that they play in.

That's what Ms Ryna Cilliers and Ms Lara Nieuwenhuis learnt when they helped children to draw pictures about the area in which they normally play.

The duo are lecturers in Theory of Design in the Department of Applied Design at the Cape Peninsula University of Technology (CPUT) who study aspects involving participatory and art-based research and co-design.

Nieuwenhuis says that **children's voices are all too often not heard when research for resilience planning is done, or when projects to support communities are conceptualised.**

"Often the social research methods normally used with adults are not age-appropriate when one tries to understand a child's lived experiences and views," adds Cilliers.

The researchers tuned into children's creative and expressive sides when they in 2019 embarked on a project called "A Child Centered Approach to Urban Resilience Research: participatory, art-based research with children from an under-resourced urban community." It explored the use of a participatory and art-based research project to communicate the play experiences of children growing up in under-resourced areas.

Funded by CHEC and the City of Cape Town, it ran concurrently with the City's Development of a Resilience Strategy. The funding supported research was intended



to offer a practical influence on policy development and implementation.

"Insights on the children's play experiences helped us to better understand their relationships with their environments. This is good to know for urban planning and strategies, as well as for services delivery," notes Ms Cilliers.

Community stakeholders such as the South African Education project (SAEP) staff, volunteers of a Phillipi primary school literacy program, and teachers working in local crèches and early childhood development facilities helped to conceptualise, design and implement the project.

"The stakeholders were invaluable. They allowed us to integrate our activities into children's everyday schedule and provided insights into their lived experiences," says Nieuwenhuis.

Cilliers acknowledges that participatory research projects involving many stakeholders, including community members and children, are not always plain sailing.

"One needs to expect curve balls and think on one's feet to manage situations that pop up," she adds. Right from the start, the motto of "kids come first and research comes second" served them well.

The duo presented art workshops at a school in Philippi, on the Cape Flats, an area of great poverty and socio-economic challenges. On paper the project was well thought out, with clear objectives and plans on how the workshops would run thanks to the volunteers.

However, implementing it was a different matter.

Cilliers for instance planned to only hold three workshops with 20 primary school learners (aged 8 to 10) over the course of three weeks. In the end 120 children took part in 12 workshops.

That's because she soon realised that it would be unethical and exclusionary - and perhaps even simply downright mean - to only let some children participate in an enriching extramural activity. Also, she felt it was unfair to leave some out, just because their parents or teachers did not return the necessary consent forms.

"Some children became disheartened when they learnt that they'd be excluded, or had to take part in a separate group. Even after they were included, it took some time to lift their spirits," Cilliers remembers.

The project taught the research duo the importance of an inclusive and participant centered approach. By including SAEP in all phases of the project and centering all decisions around the needs and well-being of the children, they learnt more about their lived experiences.

The researchers provided practical recommendations to the City. SAEP learned more about the children, and the youngsters themselves received a toolbox of new approaches to communicate their everyday experiences with.

Afterwards Cilliers said: "If you know that different stakeholders' needs are met, you know that there will be buy-in, which increases the overall integrity and value of a project."

TAKING THE LEAD FROM END USERS

Companies like to boast that they have an app for this, and an app for that. However, far too often they do not derive as much benefit from such technology tools as they would have liked to, because the design and functionality were not guided by the intended end users.

This was an issue that Mrs Hester Claassen, a former lecturer in industrial design at the Cape Peninsula University of Technology (CPUT), sought to address whilst undertaking her master's degree studies in industrial design.

She had in mind to develop an app that could streamline workflow and co-operation on a wine farm.

"Several studies have been done on using information and communication technologies, or ICT, in the wine industry, but most were not done from the perspective of participatory design. Most focused on the technological opportunities themselves, rather than looking at the needs of users, or they failed to study the work practice itself," says Mrs Claassen.

Mrs Claassen did not want to make the same mistakes. She therefore made sure to place the input of participants front and centre in her project. Her approach was rooted in aspects of participatory and user-centred design methodologies. In the process she was able to involve potential end users throughout the entire research cycle.

"My focus was on trying to get the best possible human input into the solution. I tried to keep the process quite low tech, to make it more accessible to everyone," she says reflecting on her research project.

Her study was conducted on Goede Hoop, a small wine farm between Stellenbosch and Cape Town. She received input from representatives of different levels of operation on the farm: the farm owner, the farm manager and a foreman working in the vineyards.

"Managing multiple stakeholders and their different perspectives is an important aspect of participatory design," notes Mrs Claassen.

The three participants were shadowed and videoed while they went about their daily work.

Mrs Claassen rates such ethnographic video recordings as important tools in the arsenal of researchers wanting to capture activities as they unfold over time.

"As a medium, video allows the portrayal of fictitious futures, thus displaying the same malleability as clay does for the industrial designer," she adds.

A drawback is however that many hours of video material are often created in the process, that results in time-consuming analysis.

To side-step this issue, Mrs Claassen turned to the use of video cards, that allows design teams to cover vast amounts of video material in a short time.

"After each shadow session we wrote down our main observations on post-it notes and organised them into an emerging thematic map.

The video cards were shown separately to the farm owner, the farm manager and the foreman, who then had the chance to reflect on what they saw and explain what was happening in each clip.

Their annotations were later combined and compared. These highlighted differences in their perspectives as well as shared understanding between the stakeholders.

"The different stakeholders' perspectives helped us gain a better understanding of the work practice on the farm. Their thoughts and different perspectives informed design openings and the design process behind a suitable app."

Mrs Claassen believes that the use of paper models, video cards and other methods helped to democratise the design process.

"We could involve more people in our workshops, because educational and organisational barriers (such as different levels of authority) were more easily bridged. It gave people the opportunity to identify areas of improvement in a system, and to create a space in which they could contribute to possible improvements."

Mrs Claassen therefore rates the video card method as a worthwhile inclusive process to successfully use in other communities and by other projects.

"This approach works well when you want to make sure that stakeholders collaborate on identifying research questions and therefore contribute their knowledge to the process.

"Engaged scholarship and research can be very time-consuming, yet it opens different ways of communication and provides a safe space for people to provide their insights."



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