University of Basel

NELSON MANDELA UNIVERSITY

Ten Years of Collaboration

Healthy Schools for Healthy Communities

"Education is the most powerful weapon"

- Nelson Mandela

United Nations
Educational, Scientific and
Cultural Organization

UNESCO Chair on Physical Activity
and Health in Educational Settings,
University of Basel, Basel, Switzerland

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Glossary

AIESEP	International Association for Physical Education in Higher Education
BRICSCESS	The BRICS (Brazil, Russia, India, China and South Africa) Council of Exercise and Sports Science
CAPS	South African Curriculum and Assessment Policy Statement
CCT	Centre for Communication and Technology, Nelson Mandela University, ZA
CPTD	Continuing Professional Teacher Development
DASH	Disease, Activity and Schoolchildren's Health study
DSBG	Department of Sport, Exercise and Health, University of Basel, CH
ECSS	European College of Sport Science
HMS	Human Movement Science Department, Nelson Mandela University, ZA
HOD	Head of Department
ICCSPE	International Council of Sport Science and Physical Education
KaziAfya	Translated from Swahili into 'being physically active for health', investigates the effects of a school-based intervention programme on growth, health, and well-being in three African countries.
KaziBantu	Translated from Swahili and Xhosa into 'active people', aims to promote health literacy through a comprehensive school-based lifestyle intervention programme.
KaziCHAT	Part of the *KaziHealth* section of the larger *KaziBantu* project, the Kazi Comprehensive Health Assessment Tool is an online health and risk assessment tool used to capture, rate and track health and well-being indicators in teachers.
KaziHealth	Part of the larger *KaziBantu* project, focussing on teacher's health promotion.
KaziKidz	Part of the larger *KaziBantu* project and consist of Physical Education and health teaching resources for primary schoolchildren, grades 1 to 7.
KaziPlay	Part of the *KaziKidz* section of the larger *KaziBantu* project, aimed at improving physical activity and hygiene infrastructure at primary schools.
NRF	National Research Foundation of South Africa
NSNP	National School Nutrition Programme
PhASRec	Physical Activity, Sport and Recreation Department, North West University, Potchefstroom, ZA
PI	Principal Investigator
SABC	South African Broadcasting Corporation
SACE	South African Council of Educators
SASMA	South African Sports Medicine Association
SLP	Short Learning Programme
SNSF	Swiss National Science Foundation
SSAJRP	Swiss-South African Joint Research Programme
STH	Soil-transmitted helminth infections
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNITWIN	University Twinning and Networking Programme
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

Preface

Projects are components of academic activity at a university. As a rule, they last one, two or three years, after which they end. It is rare for a research collaboration to last longer. In our case it is different: for 10 years now, the Department of Human Movement Science at Nelson Mandela University in Gqeberha (formerly Port Elizabeth) and the Department of Sport, Exercise and Health of the University of Basel have been working closely together. A whole decade of intensive cooperation with a common goal: promoting an active and healthy lifestyle among underprivileged children in severely disadvantaged regions in the Eastern Cape in South Africa. This entails the integration of exercise and sport into everyday school life, as well as promoting the health of the often heavily burdened teachers. In this way the project empowers learners and teachers in settings where support is clearly needed. But how did this long-standing and intensive cooperation between two institutions that are more than ten hours flying time away from each other come about? In 2011 AIESEP, the international organisation for Physical Education, held its annual conference in Limerick, Ireland. During the conference, Cheryl and Uwe spoke about the status of Physical Education in South African schools, where it had lost its 'stand-alone' status and had been integrated into the overarching subject of Life Orientation. This meant that the subject was losing its importance. Schools in marginalised settings were particularly affected and faced many challenges: large classes, the lack of necessary facilities and equipment, Physical Education not being taught purposefully, inadequate training of teachers for Physical Education etc.

From left to right:
Prof Uwe Pühse, Prof Lungile Pepeta (†), Prof Darelle van Greunen, Prof Cheryl Walter, Prof Andrew Leitch, Prof Rosa du Randt at Nelson Mandela University, Gqeberha

Support for the teaching of PE is a passion for both of us, and we endeavoured to find ways to work together on improving the situation in SA. This was the start of our collaboration. The first visit to Port Elizabeth took place in 2012, where Uwe was taken to schools in the region and spoke to school principals and teachers and our discussions began about working collaboratively. An opportunity arose to apply for a research grant through the Swiss South Africa Joint Research programme, and Basel University and Nelson Mandela University were joined by a very strong partner, the Swiss Tropical and Public Health Institute, under the directorship of Prof Jürg Utzinger, who came on board and, with his team of young collaborators, facilitated the successful application for a three-year research project. This is how the *DASH* (Disease, Activity and Schoolchildren's Health) study was born and it provided fundamental findings that became the basis for further developments. They are detailed in this report.

This expansion would not have been possible without other essential support. The Novartis Foundation was concerned about the prevention of non-communicable diseases which will be a huge problem in this disadvantaged study population in the future. It placed its trust in us through its director Dr Ann Aerts and thus contributed significantly to the success of the project. She also built the bridge to UNESCO in Paris, which ultimately led to the award of the UNESCO Chair on Physical Activity and Health in Educational Settings. Prof Markus Gerber strengthened the team, expanded the project's reach to Tanzania and Côte d'Ivoire in cooperation with the Foundation Botnar, leading to the *KaziAfya* study. Prof Gerber also provided fundamental ideas for the development of *KaziHealth*, the physical activity and health programme for teachers. Other key members of the team are Prof Hedwig Kaiser (Head National & International Cooperation at Basel University), Prof Rosa du Randt (retired Director of the School of Lifestyle Sciences) who guided the ethics component of the study, Prof Darelle van Greunen (Director of the Centre for Community Technologies) who led the development of the *KaziHealth* App and short learning programme, and our hard-working project co-ordinators, Dr Ivan Müller and Danielle Dolley. An expanded list of all the collaborators and team members can be found in the report.

Nelson Mandela University is encouraging interdisciplinary collaboration across entities. In line with this, the *DASH* study – followed by the *KaziBantu* project – brought together a large team which included the Departments of Human Movement Science, Dietetics and Human Nutrition, Medical Laboratory Sciences, Nursing Science and Psychology, as well as the Centre for Community Technology, the Centre for the Community School and the Faculty of Education.
A number of postgraduates from both institutions

have obtained their Masters degrees through research in the projects as well as two PhDs (Ivan Müller and Stefanie Gall from Basel University). Currently there are 5 active PhD studies in the project, 4 South Africans (Danielle Dolley, Siphesihle Nqweniso, Nandi Joubert and Larissa Adams) and Patricia Arnaiz, through Basel University. We are grateful to the Eastern Cape Departments of Health and Education for allowing us to conduct research at schools. We have a signed Memorandum of Understanding with the Department of Education for the implementation of the *KaziKidz* programme in schools. We would like to thank the project schools – principals, teachers, SGBs and learners – for allowing us to use the school platform to find ways of promoting the health and well-being of learners and teachers.

Many thanks to the presidents of our universities for their support, Prof Sibongile Muthwa and Prof Andrea Schenker-Wicki, and in addition, the former Swiss Ambassador to South Africa, Mrs Helene Budliger Artieda.

We would like to dedicate this 10-year anniversary report to the memory of the late Prof Lungile Pepeta, the Dean of the Faculty of Health Sciences at Nelson Mandela University, who was a strong proponent of the project. He succumbed to Covid-19 in 2020, after being in the forefront in the fight against the virus. We remember his warmth and passion for communities and his drive to promote health and wellness, a passion which is embodied in the work of the *KaziBantu* project.

Yours sincerely,

Prof Dr Uwe Pühse
UNESCO Chair Holder,
University of Basel, Switzerland

Prof Dr Cheryl Walter
UNESCO Co-Chair Holder,
Nelson Mandela University, Gqeberha, South Africa

Institutions and Teams

University of Basel
Department of
Sport, Exercise and Health

Swiss TPH
Swiss Tropical and Public Health Institute
Schweizerisches Tropen- und Public Health-Institut
Institut Tropical et de Santé Publique Suisse

Associated Institute of the University of Basel

University of Basel
Basel, Switzerland

Department of Sport, Exercise and Health (DBSG)

HOD Uwe Pühse, Prof Dr

Scientific Partners
Hedwig Kaiser, Prof Dr
Markus Gerber, Prof Dr
Sebastian Ludyga, Dr
Harald Seelig, Dr

Project Coordinators
Christin Lang, Dr
Ivan Müller, Dr

Research Assistants
Stefanie Gall, Dr
Johanna Beckmann
Patricia Arnaiz
Jan Degen
Marina Wälti

Administrative Support
Cornelia Pagoni
Varenka Strobel
Peggy Rieck

Swiss Tropical and Public Health Institute
Basel, Switzerland

Associated Institute of the University of Basel

Director Jürg Utzinger, Prof Dr

Scientific Partners
Nicole Probst-Hensch, Prof Dr
Peter Steinmann, PD Dr
Christian Schindler, PD Dr
Kurt Z. Long, Dr
Peiling Yap, Dr
Nan Shwe Nwe Htun, Dr

NELSON MANDELA UNIVERSITY

Nelson Mandela University
Gqeberha, South Africa

Human Movement Science Department (HMS)

HOD Cheryl Walter, Prof Dr

Scientific Partners
Rosa du Randt, Prof Dr
Bruce Damons, Dr
Gail Halforty

Project Coordinators
Danielle Dolley
Siphesihle Nqweniso

Research Assistants
Larissa Adams
Nandi Joubert
Zaahirah Ismail
Madeleine Nienaber
Sesethu Ncanywa
Sikhona Yena

Administrative Support
Shona Ellis
Pippa Nell
Jenni Haysom
Deirdre Bowers

Centre for Community Technologies (CCT)

Director Darelle van Greunen, Prof Dr

Scientific Partners
Alida Veldsman
Johan Botha

Research Assistants
Roslyn Klaasen

Swiss-South African Joint Research Programme

History and Development

Switzerland and South Africa have diverse and close diplomatic relations. Both countries view each other as strategic partners with science and research as one of the key areas. The decision to take the collaboration between Switzerland and South Africa to a bilateral agreement was prompted by several diplomatic and scientific exchanges between the two countries during 2004-2007. The bilateral dialogue resulted in the signing of the Scientific and Technological Cooperation Agreement in December 2007 at the University of Basel. The bilateral agreement established the Swiss South Africa Joint Research Programme (SSAJRP) with associated cooperation instruments, including significant areas of cooperation, the establishment of leading houses, a joint committee, evaluation processes, and financial resources. The cornerstone of the SSAJRP is the joint research projects that are resting on equal funding and a partnership approach for scientific collaboration.

Since 2008 a joint research call has been launched between Switzerland and South Africa. The 4th joint call was completed in April 2021 by the Swiss National Science Foundation and the South Africa National Research Foundation through a lead agency agreement. These collaborations have a broad impact: from joint publications to mutual learning, capacity enhancement, and networks in Europe and Africa. Equally important is establishing mutual trust and friendship, catalysing to take the collaboration beyond formal agreements.

The University of Basel and the Nelson Mandela University proposal for the joint research project on *Disease, Activity and Schoolchildren's Health (DASH)* was approved for funding by the joint scientific evaluation committee for Phase II of the SSAJRP. The evolution of the project gave birth to the now *KaziBantu* project. The joint research projects under the SSAJRP aim to provide seed funding with the intention that the projects reach policy impact or innovation and scaling.

„Education is the most powerful weapon that can be used to change the world'. (Nelson Mandela)

DASH study
University of Basel, CH
Nelson Mandela Metropolitan University, Port Elizabeth, ZA

We have learned that the success of the joint research projects and the achievement of knowledge production – evident in publications and conference contributions – hinge on the availability of research infrastructure, an enabling environment, financial support, and reciprocal exchanges. The scaling of projects for societal challenges, on the other hand, requires a felt need by the reciprocates and the alignment with national objectives. The *KaziBantu* project gives effect to these criteria and provides an opportunity for Swiss researchers to apply their knowledge and expertise in a unique and diverse research environment.

KaziBantu
Healthy Schools for Healthy Communities

The *KaziBantu* project is a valued contribution to South Africa's challenges concerning neglected and lifestyle diseases in line with the Sustainable Development Goals. The impact of the *KaziBantu* Joint Research Project created a framework for scaling not only in South Africa but also in other parts of Africa, indeed an exemplary project for reaching joint research projects.

Our project team members, Larissa Adams (left) and Jan Degen (right), accompany Raphaela Kübler (second left) from the Swiss Embassy in South Africa, to one of our project schools. The principal, Dr Christelle Hendricks (second right), showed how the KaziBantu project has been implemented at school.

The Embassy of Switzerland in South Africa is pleased that the *DASH* project evolved to the *KaziBantu* project achieving the intended objective of the Scientific and Technological Agreement between Switzerland and South Africa on several levels, for example, ability to scale, policy impact, and impact on societal challenges.

Embassy of Switzerland in South Africa

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

As the official representation of Switzerland in South Africa, the Embassy covers all matters of diplomatic relations between the two countries. It represents Swiss interests in politics, economics, and finance, legal regulations, science, education, and culture. All these interventions are relevant to the planned national interventions, enabling the continued support of the Swiss Embassy in Pretoria to demonstrate the societal impact of the SSAJRP and, in particular, to support our project activities. The Embassy promotes cooperation in education, research, and innovation to strengthen collaboration between the two countries regarding research and innovation. During the 10 years of collaboration, the Swiss Embassy has been intensively supportive of bringing politicians and decision-makers on board and developing advocacy work related to the national policy on school health. Furthermore, the Swiss Embassy published the outcomes in the SSAJRP report, where *KaziBantu* was a part of.

Moreover, the Swiss Embassy supports the roll-out of the interventions through:

- High-level engagements with the Departments of Health, Basic Education, and Social Development for their support to ensure national roll-out;
- Engagement with the country representatives of the United Nations Agencies in South Africa, including the World Health Organization;
- Creating a platform for the research team to engage with relevant stakeholders;
- Facilitate an interview for the research team with national media houses; and
- Undertaking advocacy events through the hosting of showcase events for politicians and decision-makers.

UNESCO Chair
on 'Physical Activity and Health in Educational Settings'

United Nations Educational, Scientific and Cultural Organization

UNESCO Chair on Physical Activity and Health in Educational Settings, University of Basel, Basel, Switzerland

UNESCO is the United Nations Educational, Scientific and Cultural Organization created with the aim of fostering international cooperation around its key priority areas education, natural and social sciences, culture and communication. As part of its agenda, UNESCO launched the UNITWIN programme seeking to promote collaboration between universities and higher education institutions worldwide. The programme mission is to bridge the knowledge gap, mobilize international expertise and contribute to the achievement of the Sustainable Development Goals defined in Agenda 2030.

One way of achieving this is by supporting the establishment of UNESCO Chairs such as ours. The UNESCO Chair on "*Physical Activity and Health in Educational Settings*" is a research and teaching unit at the University of Basel, Switzerland, and at the Nelson Mandela University in Gqeberha, South Africa. It was installed in April 2019 with Prof Dr Uwe Pühse (Switzerland) as UNESCO Chair holder and Prof Dr Cheryl Walter (South Africa) appointed as Co-Chair and will last for an initial period of four years.

Learn more about the UNESCO Chair **here**

Scan this QR code to direct you to the UNESCO Chair web page to learn more.

The cooperation with the partners of Nelson Mandela University goes far beyond scientific collaboration. Not only have we published together numerous peer-reviewed papers, but close friendships have developed over the past few years. Numerous students and university employees from Switzerland and South Africa were able to gain experience in a culture that was new to them during various project trips abroad. This mutual learning from each other is extremely valuable and allows to critically reflect one's own thoughts and actions. With this, we learn for life! Moreover, the various projects (DASH, KaziBantu, KaziAfya) have improved everyday school life for many learners and made a significant contribution to strengthening children's growth, health and well-being. But the projects also show how difficult it is to use the findings from empirical research to achieve sustainable change in real life. This goal has not yet been fully achieved; it gives us strong motivation to continue our cooperation intensively in the years to come.

Prof Dr Markus Gerber
Head of Division Sport and Psychosocial Health, Department of Sport, Exercise and Health, University of Basel, Switzerland

Workshop in Cape Town during the Urban Health Conference 2017 with Prof Dr Hedwig Kaiser (middle), Head National and International Cooperation at the University of Basel, and representatives from Novartis Foundation on future strategies for KaziBantu.

Highlights Across 10 Years of Collaboration

2011

The beginning

2014

DASH study

2018

KaziBantu Healthy Schools for Healthy Communities

2018

KaziAfya

2020

KaziBantu sustainability study

2011

The beginning

The International Organisation for Physical Education (AIESEP) holds its annual conference in Limerick, Ireland. Prof Uwe Pühse and Prof Cheryl Walter both attend the conference. A regular intensive exchange followed, which led to a first joint project.

Uwe: "I was a member of the executive board and on the opening night I saw a woman I had never before seen at one of our conferences. I introduced myself, we struck up a conversation and this is how I met Cheryl Walter, not knowing what was to come out of that first conversation".

Cheryl: "It was my very first AIESEP conference, I was the only South African there, and I think perhaps the only person from the African continent. I realized that many of the conference attendees knew one another and had regularly attended AIESEP conferences over the years. I was so grateful that Uwe introduced himself to me and introduced me to others and ensured that I felt welcome at AIESEP".

2014

DASH study

October 2014: Funding of the DASH study by the Swiss South African Joint Research Programme.

As part of the Swiss-South African Joint Research Programme (SSAJRP), the Swiss National Science Foundation (SNSF) launches a call for joint research projects with its sister organisation in South Africa, the National Research Foundation (NRF). Twelve projects are funded; among one of them our study "*Disease, Activity and Schoolchildren's Health (DASH)*".

2015

First data assessment in Gqeberha[1]

January 2015: The first data assessment is conducted at Primary Schools in Gqeberha.

20-m shuttle run test at a primary school in Bethelsdorp, Gqeberha

In order to assess the physical health and psychological well-being of primary schoolchildren in and around Gqeberha, researchers and volunteers from the *DASH* project start collecting data. Among the tests performed were the 20-m shuttle run test, grip strength test, stool samples to test for worm infections and other physical health parameters such as blood pressure and body composition.

[1] *Previously known as Port Elizabeth*

2017

Nelson Mandela University Engagement Excellence Award

July 2017: Prof Cheryl Walter is awarded the Engagement Excellence Award from Nelson Mandela University.

The award acknowledges the groundbreaking *DASH* study, which focuses on children's health in poorly resourced schools and the effect of common infections on their growth and learning ability.

2017

DASH Symposium

October 2017: The KaziBantu project (Healthy Schools for Healthy Communities) is officially launched with a symposium.

The *DASH* project spanned three years and culminates in the 2017 symposium, where the results of the study are shared. The keynote speakers include Christina Wadhwani (Novartis Foundation); Dr Patricia Machawira (UNESCO Regional Advisor for Sub-Saharan Africa); Mrs Helene Budliger Artieda (Swiss Ambassador); Prof Hedwig J. Kaiser (Vice-President at the University of Basel, Switzerland) and Prof Derrick Swartz (Vice Chancellor of Nelson Mandela University).

While the *DASH* project comes to an end, the *KaziBantu* project is launched as a result of a continued co-operation among the University of Basel and the Nelson Mandela University.

Rear left to right: Dr Peter Steinmann, Prof Darelle van Greunen, Jacquelene Friedenthal, Prof Andrew Leitch, Prof Uwe Pühse
Front left to right: Prof Cheryl Walter, Prof Hedwig Kaiser, former ambassador Helene Budliger Artieda, Dr Patricia Machawira, Christina Wadhwani at the DASH symposium at Nelson Mandela University, Gqeberha

2018

KaziBantu – Healthy Schools For Healthy Communities

April 2018: Start of collaboration with the Novartis Foundation.

The 'Disease, Activity and Schoolchildren's Health' (*DASH*) study documented the poor health status and double burden from communicable and non-communicable diseases of children in disadvantaged communities in Gqeberha, South Africa. It also revealed the potential for improvement through PA and health literacy interventions, following the principles that PA is key in promoting health and well-being among schoolchildren, that learning this at a young age will have long-lasting effects throughout life, and that PA is especially relevant for children from low socio-economic communities living in LMICs. Moreover, it emphasized the role of teachers as influential and willing advocates.

Building on these results and with support from the Novartis Foundation, *KaziBantu* is established, a comprehensive school-based lifestyle intervention programme aiming at promoting health literacy for both children and teachers of primary schools from disadvantaged communities in Nelson Mandela Bay.

The Novartis Foundation aims to improve the health of low-income populations by working with local authorities and partners to re-engineer health systems from being reactive to proactive, predictive and preventative. As part of the "Better Hearts Better Cities" initiative, the foundation puts a special focus on addressing heart health among low-income urban populations – thus making the Novartis Foundation an ideal partner to further intensify the collaboration between the University of Basel and Nelson Mandela University.

2018

KaziAfya study

In January 2018, the Fondation Botnar funded the KaziAfya study. The research project is planned to span 4 years.

KaziAfya, which is a Swahili phrase meaning "being physically active for health", is a sister project of *KaziBantu*. The randomized-controlled intervention trial is led by Principal Investigator (PI) Prof Markus Gerber (University of Basel, Switzerland) in collaboration with Prof Cheryl Walter (Nelson Mandela University in South Africa), Prof Bassirou Bonfoh (Centre Suisse de Recherches Scientifiques in the Ivory Coast), Dr Fredros Okumo (Ifakara Health Institute in Tanzania), and Prof Jürg Utzinger (Swiss Tropical and Public Health Institute in Switzerland).

Fondation Botnar is a Swiss-based foundation which aims to improve the health and well-being of children and young people in growing urban environments around the globe.

> It has been a joy working with UniBas, Swiss TPH and Nelson Mandela University for 4 years on *KaziBantu*. Its evidence on the importance of including children and teachers in cardiovascular population health initiatives will have far reaching global impact.

Dr Ann Aerts
Head of the Novartis Foundation, Basel, Switzerland

2019
UNESCO UniTWIN Chair

March 2019: Prof Uwe Pühse and Prof Cheryl Walter are awarded a UNESCO Chair on "Physical Activity and Health in Educational Settings".

The Chair examines the relationships between exercise and sport, health and academic performance, and develops specific improvement measures.

2019
BRICSCESS conference Cape Town

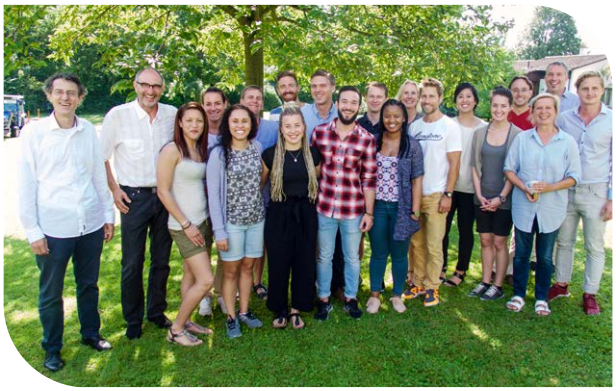
October 2019: Stakeholders from 6 different countries meet to discuss the future of KaziBantu.

A workshop jointly hosted by the International Council of Sport Science and Physical Education (ICCSPE) and the *KaziBantu* project team is held at the South African Sports Medicine Association (SASMA) BRICSCESS Conference in Cape Town. The theme of the workshop entails "Sport for Development", as well as the *KaziBantu* projects' dissemination, namely the *KaziKidz* and *KaziHealth* programmes. Various Physical Education heads from several institutions around Southern Africa are invited to speak and present on children's health and the current status of Physical Education. The speakers include Detlef Dumon (Executive Director ICSSPE), Prof Dr Cilas Wilders (Head of Department for Post Graduate Studies in the Faculty of Education at the University of Namibia), Dr Dawn Tladi (Lecturer in the Department of Physical Education, Health and Recreation at the University of Botswana), and Dr Sookhenlall Padaruth (Head of Department and Senior Lecturer in the Movement and Physical Education Department at the Mauritius Institute of Education). The purpose of the workshop was to collaborate with different countries in Southern Africa, to take hands and to unite as a force to emphasise the importance of Physical Education and to facilitate the implementation thereof.

2020
KaziBantu sustainability study

March 2020: SNSF funds the KaziBantu sustainability study

Intending to assess the sustained implementation of *KaziBantu* and the accompanying health effects in children and teachers, a follow-up study was designed to determine the long-term feasibility and effectiveness of the intervention in the previously studied schools, under real-world conditions.
In March 2020, the *KaziBantu* sustainability study received funding from the SNSF to conduct the follow-up phase between 2020 and 2023. This comprehensive long-term evaluation will enable monitoring the continued impact of the *KaziBantu* intervention in the lives of children and teachers, as well as to pinpoint the strengths and challenges thereof. Ultimately, the generated evidence will enable recommendations that may lead to local policy and the sustainable integration of the programme into the schools' curriculum.



Prof Dr Jürg Utzinger (left), Director of the Swiss TPH, at a KaziBantu workshop in Basel, during a research visit of four South African PhD students (Larissa Adams, Danielle Dolley, Siphesihle Nqweniso and Nandi Joubert).

2020
Commonwealth Digital Health Award

November 2020: Prof Darelle van Greunen and team are awarded a Merit Award at the 4th Commonwealth Digital Health Awards 2020.

The Commonwealth Centre for Digital Health acknowledges the *KaziHealth* mobile app in the category "Health Education and Health Promotion".

2020
Nelson Mandela University Innovation Excellence Award

December 2020: Prof Darelle van Greunen and team are awarded a "Innovation Excellence Project Award" from the Nelson Mandela University.

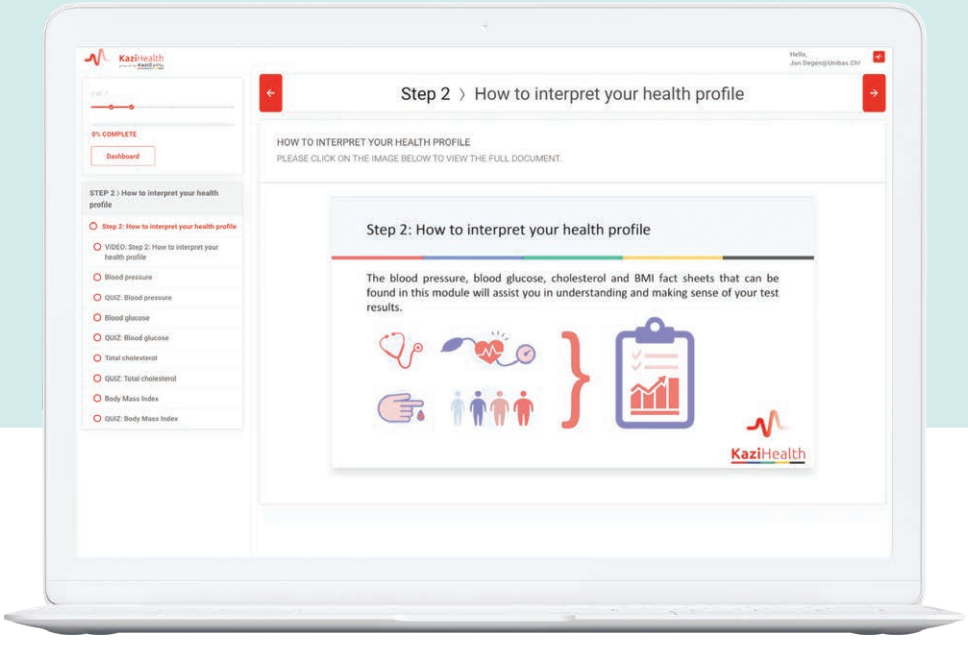
The award acknowledges the development of the *KaziHealth* workplace health promotion programme.

Our vision for the future

Short Learning Programme for *KaziKidz* and *KaziHealth*

In-service training programmes will be used to further disseminate KaziKidz and KaziHealth.

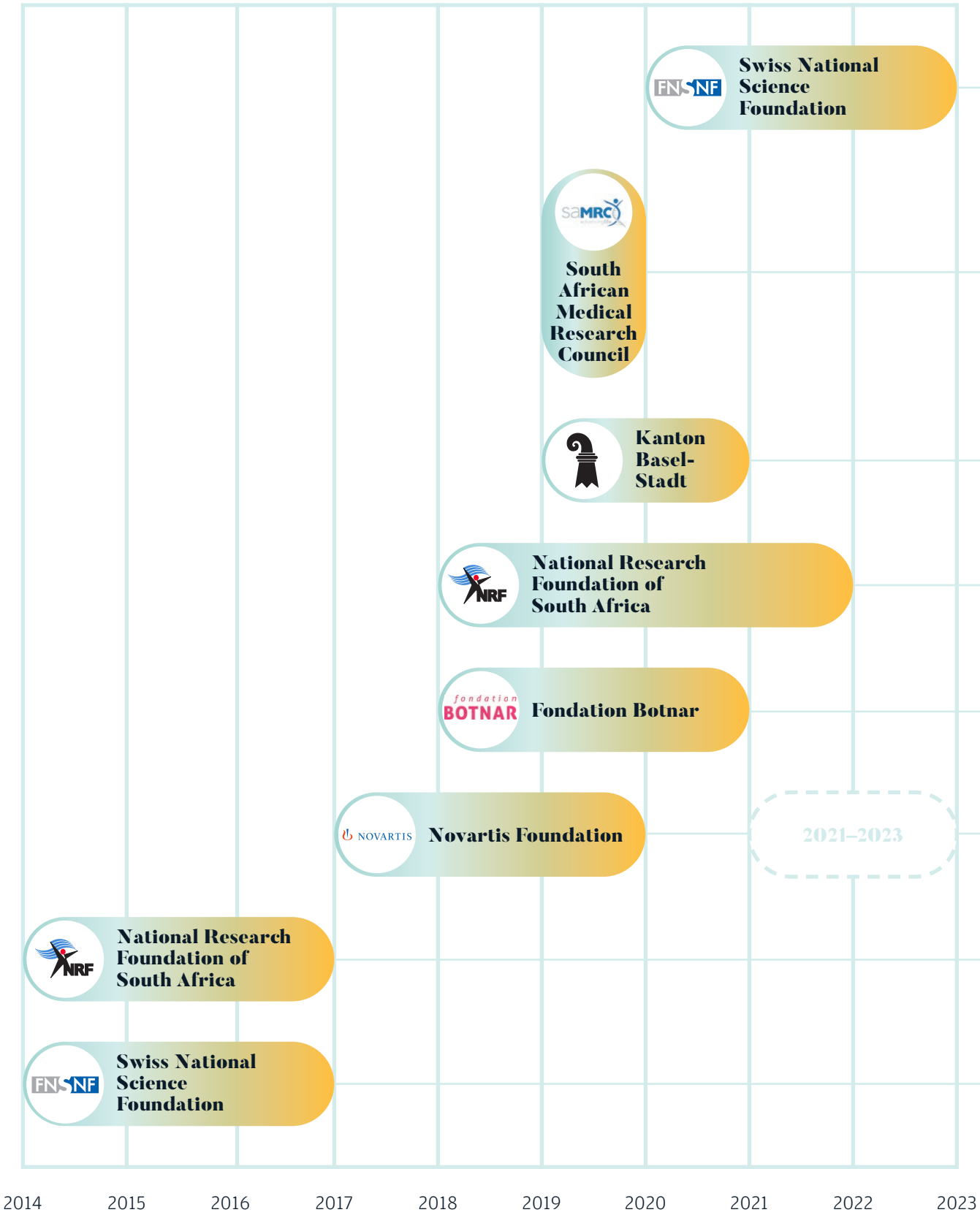
The aim is to disseminate the developed teaching products initially to 300 quintile 3 primary schools in the Eastern Cape and then to distribute them more widely to benefit learners and wider school communities in other regions of South Africa. In order to foster long-term cooperation, a Memorandum of Understanding between the Eastern Cape Department of Education and the Nelson Mandela University was signed. It formalises the presentation of Short-Learning Programmes (SLPs), such as the *KaziKidz* SLPs focusing on life skills and the *KaziHealth* SLP promoting teachers' health, to in-service teachers. If opportunities for collaboration arise in other areas of common interest, these can also be explored with the support of the Swiss Embassy in Pretoria, South Africa.



Screenshot from the KaziHealth Short Learning Programme

Supporting Partners

During our 10 year cooperation, we have been supported by the following organisations:



KaziBantu: Sustainability study

KaziHealth: Teachers Workplace Health Intervention

KaziPlay: Playground and sanitation intervention

KaziBantu: Healthy Schools for Healthy Communities

KaziAfya: Schools for Active and Healthy Kidz

KaziBantu: Healthy Schools for Healthy Communities

DASH: Disease Activity and Schoolchildren's Health

Projects

Disease Activity and Schoolchildren's Health (DASH)

The *DASH* study, or in full the *Disease, Activity and Schoolchildren's Health* study in Gqeberha, South Africa, was a joint research project between the University of Basel, Switzerland, the Swiss Tropical and Public Health Institute in Basel, Switzerland, and the Nelson Mandela University in Gqeberha, South Africa. The project duration spanned from 2014 to 2018.

The aim was to assess the burden and distribution of communicable diseases and non-communicable chronic conditions among approximately 1,000 primary school-aged children in selected underprivileged schools near Gqeberha, South Africa, and to assess their effect on children's physical fitness, cognitive performance and psychosocial health. Furthermore, the impact of key interventions, e.g. (1) Physical Education programme, (2) health and hygiene education and (3) nutritional intervention, on overall child health was estimated and the results were published in various peer-reviewed scientific journals.

Physical Education Programme | **Health and Hygiene Education** | **Nutritional Invention**

I have had the privilege to be involved with the University of Basel and Nelson Mandela University (and the Eastern Cape Department of Education) collaboration from its inception 10 years ago. I can truly confirm that it has been an amazing and very enriching experience in so many ways – being involved in:

- The development and execution of the three joint projects *DASH*, *KaziBantu* and *KaziAfya*.
- Experiencing the impact that these projects have had in the communities where these were and still are implemented, and also learning so much from the participants in return.
- The many publications emanating from the research conducted.
- Seeing the many students from both Basel University and Nelson Mandela University grow through their experience with one or more of the three umbrella research projects, being able to collaborate with one another, rubbing shoulders and sharing cultural experiences with a student from another country and being able to use the research data gathered to contribute towards obtaining either their masters or doctoral degrees.
- The people that crossed my life in the process – from the core and extended research team members, sponsors, stakeholders to the participants in the relevant joint projects.

I therefore extend my heartfelt appreciation and congratulations to all. My sincere wish is that this collaboration will continue for many more years to come. The long-term effects on the health of both the children and teachers will not only

benefit those participants currently involved in the projects, but the latter have the potential to contribute to alleviation of the burden of disease and subsequent reduction of the country's future health costs, particularly if further strengthened.

Prof Dr Rosa du Randt
Former Director of the School of Lifestyle Sciences, Human Movement Science Department, Nelson Mandela University, Gqeberha, South Africa

The *DASH* study's key findings were:

1) Soil-transmitted helminth (STH) infections and low physical fitness appear to hinder the children's capacity to pay attention and thereby impede their academic performance. Furthermore the STH infections seem to have a small, but significant, negative effect on the physical fitness of infected children, as expressed by their maximum oxygen uptake (Gall et al. 2017, Müller et al. 2016).

2) Repeated deworming treatment caused a shrinking of the risk of soil-transmitted helminthiasis, however the treatment should be supplemented by other public health measures such as water, sanitation and hygiene (WASH). The high spatial heterogeneity suggests that data from additional schools in different neighbourhoods will be required to determine a locally appropriate intervention strategy, which ideally is not only carried out at school level, but covers the entire local population (Müller et al. 2017).

3) The findings indicate that there is a positive association between self-reported physical activity and health-related quality of life which is important for two reasons. Firstly, good health-related quality of life influences a child's health and well-being positively and secondly, it has measurable positive effects later in life on both an individual and societal level (Gall et al. 2020).

4) A multidimensional, school-based physical activity intervention can reduce the increase in cardiovascular risk factors (BMI and skinfold thickness) and can contribute to the maintenance of academic performance among socio-economically deprived schoolchildren in South Africa. School administrators should ensure that their school staff implements physical activity lessons, which are a compulsory component of the school curriculum (Müller et al. 2019, Gall et al. 2020).

KaziBantu – Healthy Schools for Healthy Communities

The follow-up study, the *KaziBantu* project, is a specially tailored school-based intervention programme based on the *DASH* results aimed at consolidating the practice of Physical Education and ensuring the physical literacy and healthy active living of schoolchildren and teachers. The main goals of the *KaziBantu* project are closely connected to UN's sustainable development goals (SDGs), namely «good health and well-being» (SDG3) and «quality education» (SDG4). The *KaziBantu* project (translated from Swahili and Xhosa into "active people") is dedicated to creating long-lasting positive changes in health, and to providing opportunities for physical activity, by implementing a multi-faceted approach to address the health problems faced within disadvantaged settings in low- and middle-income countries. Two programmes were designed to address these challenges: *KaziKidz* and *KaziHealth*.

KaziKidz
Teaching Material for Schoolchildren

KaziKidz Teaching Materials

KaziKidz is a holistic educational and instruction tool aimed to enhance schoolchildren's overall health. The teaching material comprises freely available premade lessons covering the topics Physical Education, Moving-to-Music, and Health, Hygiene and Nutrition. The lesson plans are aligned with South Africa's Curriculum and Assessment Policy Statement (CAPS) and include grades 1-7, with lesson plans for the whole school year. Furthermore, the *KaziKidz* Teaching Material also entails cue-card summaries, sing-along-songs and multiple cartoons.

KaziHealth

KaziHealth Promotion Programme

KaziHealth is a workplace health intervention programme, designed specifically for school teachers, teaching within low-resourced school settings. The programme aims to educate and improve health behaviours in teachers by integrating three lifestyle interventions: physical activity, nutrition and stress management. The programme starts with an individualised health risk assessment, followed by face-to-face lifestyle coaching sessions and self-monitoring and motivation through the *KaziHealth* app. Additionally, the risk assessment tool *KaziCHAT* is being used by researchers to capture, rate and track teachers' health and well-being indicators. The intervention is aimed at reducing cardiovascular risk factors and improving physical activity, diet and nutrition, and psychosocial health. For schoolchildren, teachers are important role models and have a profound impact. Thus, promoting good health among teachers ultimately also promotes learner's health.

Physical Education expert coaches primary school teacher.

> I believe that through the collaboration and the development of innovative technology solutions, this project is making a positive impact by encouraging digital transformation in healthcare and self-management of health. The partnerships enable us to assist in how healthcare information is obtained and disseminated. Through tools such as *KaziCHAT* that provide medical test results, diagnosis, and explanations of illnesses, educators are now becoming participants in their well-being. The addition of the *KaziHealth* App enables participants to respond to test results and diagnosis.

Prof Dr Darelle van Greunen
Director of the Centre for Community Technologies, Nelson Mandela University, Gqeberha, South Africa

The *KaziBantu* project implements and researches both the *KaziKidz* and the *KaziHealth* programmes. For a more sustainable approach our team has developed Short Learning Programmes (SLPs) which are to be included in the continued professional teacher development programme (CPTD) for South African primary school teachers.

KaziPlay

Complementing the *KaziBantu* project, the *KaziPlay* initiative enhances playground facilities and sanitation amenities at lower resourced school settings. In collaboration with two local architects, playground designs were created and implemented at two schools located in disadvantaged settings in and around Gqeberha, South Africa.

Visual representation of the KaziPlay playground

Furthermore, sanitation facilities were renovated and a water reticulation system was put in place, which will water plants surrounding the playgrounds. This initiative was funded by the Kanton Basel-Stadt, in Switzerland.

The playground and sanitation facility designs were made in such a way that they can be adapted and reused at other school settings within low-and-middle-income countries.

Learn more about *KaziBantu* and all its initiatives at **www.kazibantu.org** and follow up on Twitter to keep an eye on our current events **@KaziBantu**

KaziBantu
Healthy Schools for Healthy Communities

Scan this QR code to be directed to the KaziBantu website.

KaziAfya
Schools for Active and Healthy Kidz

KaziAfya

KaziAfya, a four-year randomized controlled intervention trial, aims to assess and compare the prevalence of growth, nutritional status, infectious diseases, cardiovascular health risk markers, and psycho-social health among three African countries. The study will further test a 2-year intervention programme combining multi-micronutrient supplementation and physical activity. The latter drives the connection between the two sister projects *KaziBantu* and *KaziAfya*, as the same teaching toolkit for the physical activity intervention arm – *KaziKidz* – is implemented in both projects. Currently, *KaziAfya* is in its final year, approaching the third and last data assessment in each country. Hereby, approximately 4,000 children from public schools located in marginalized areas in South Africa (Gqeberha), Tanzania (Ifakara), and the Ivory Coast (Taabo) take part in the intervention and data assessments.

Learn more about *KaziAfya* at **www.kaziafya.org**

KaziAfya
Schools for Active and Healthy Kidz

Scan this QR code to be directed to the KaziAfya website.

Short Learning Programmes

Teachers in South Africa are required to annually acquire professional development points. Short Learning Programmes (SLPs) are one way for them to earn such points. In order to effectively contribute to our vision of *Healthy Schools for Healthy Communities*, we have entered a Memorandum of Understanding with South Africa's Eastern Cape Department of Education. Together, we developed three SLPs focusing on the upskillment of educators. These SLPs represent an outstanding chance to sustainably integrate *KaziBantu* components into governmental structures and ultimately ensure a lasting positive impact of the *KaziBantu* project.

In South Africa, Physical Education lost its standalone subject status in 1997 and was reduced to a learning outcome of the new school subjects “Life Orientation” (for grades 4 to 7) and “Life Skills” (for grades R to 3). It can be difficult for teachers to specialise in all the learning areas that make up these two subjects, and Physical Education is often seen as less important than other learning areas and therefore neglected. However, UNESCO recommends Physical Education to be presented at least 2 hours per week as a standalone subject. While the Department of Basic Education actively supports Physical Education in the current curriculum, the professional know-how as well as existing sports facilities to implement Quality Physical Education are often limited. Thus, two of our SLPs focus on enhancing teachers' knowledge about Physical Education while the third SLP covers teachers' health. All SLPs were developed by a team of South African and Swiss experts, including foundation phase teachers who are familiar with the challenges in resource-poor settings.

> “The Department of Education values projects such as *KaziBantu* where the focus lies on improving the health and wellbeing of our children. *KaziBantu* has taught the teachers, as well as the kids, to work from a basis of zero resources. When you create healthy children, a healthy environment at school, you obviously create a healthy community – it is a cycle that you improve.

Mr Ernest Gorgonzola
District Director, Eastern Cape Department of Education, Nelson Mandela Bay Municipality, South Africa

KaziKidz – Foundation Phase
Short Learning Programme 1

The KaziKidz Programme provides ready-made lessons for Grades 1 to 7

Children in grades 1 to 3 are between 6 and 9 years old. The movement behaviour at this age is characterized by an enormous and pronounced need for movement, to play and compete. Ideally, children at this age engage with middle-to-high-intensity physical activity for more than one hour per day.

Physical Education lessons at a primary school in Gqeberha

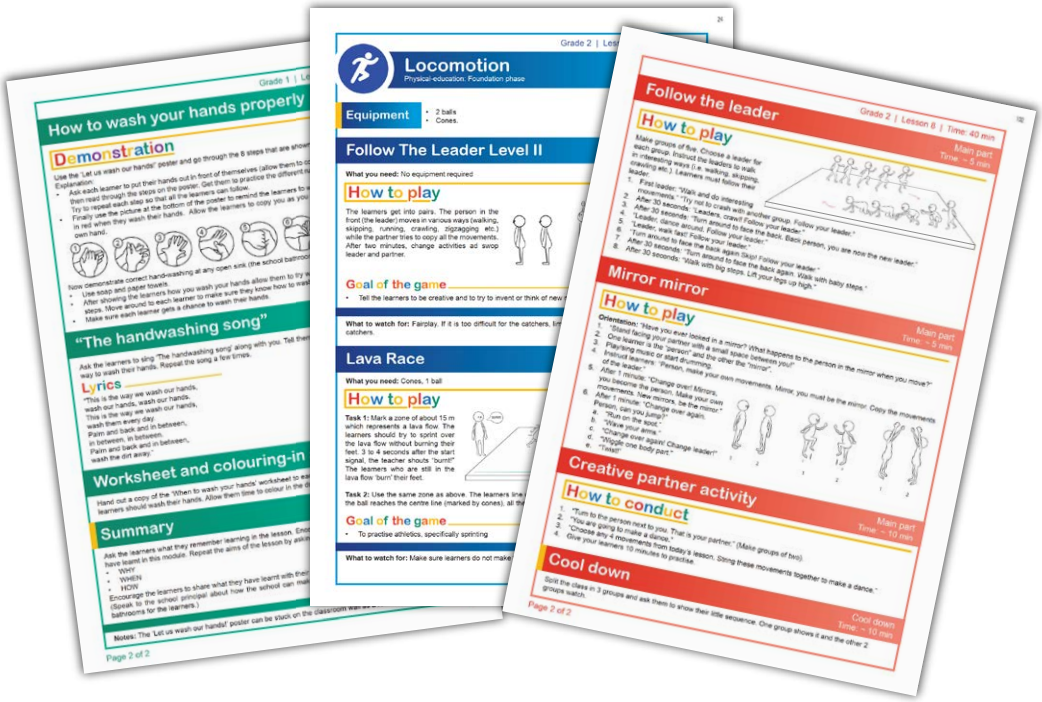
The main focus of this SLP is the promotion and support of Quality Physical Education teaching. The aim is to enhance sport pedagogical knowledge of the foundation phase teachers and to further support them teaching Physical Education by introducing the *KaziKidz* teaching material. The course's sessions cover topics such as (i) The learner in the lower primary phase; (ii) Basic motor development; (iii) Basic perceptual motor development; (iv) Basic movement skills; and (v) The foundation phase curriculum on sport.

The research team including the South African and Swiss project coordinators in action

KaziKidz – Intermediate & Senior Phase

Short Learning Programme 2

Learners from the intermediate and senior phase are usually 10-13 years old. Physical Education exercises are more skill-oriented and complexity of the tasks is increased (in contrast to the foundation phase, where Physical Education is taught in a more playful and story-packed way). The purpose of this SLP is to promote and support Physical Education in the intermediate and senior phase of primary school by providing in-service training for teachers. It covers similar topics as the foundation phase SLP, while adjusting emphasis on certain topics where necessary. The *KaziKidz* lessons and SLP content provide teachers with pedagogically sound physical activity content that in turn enables children to learn and practice the essential skills for joyful and rewarding lifelong participation in sport and physical activity.



KaziHealth

Short Learning Programme 3

While the *KaziHealth* programme initially was designed as a research project, the *KaziHealth* SLP "A Healthy Lifestyle for Teachers" further transitions the *KaziHealth* intervention towards a broadly applicable workplace health promotion programme.

Many teachers experience high levels of stress and without effective coping strategies and support, this can lead to physical, emotional and mental exhaustion, as well as many other health problems such as elevated blood pressure. This SLP applies a behaviour change model that targets health behaviours, as well as perceived levels of stress and mental health outcomes. By walking participants through the five core steps of *KaziHealth*, the SLP assists them to expand their literacy about their health status, reflect on lifestyle choices, and take action upon self-chosen areas of change. Learn more about *KaziHealth* at www.kazibantu.org/kazihealth

KaziHealth

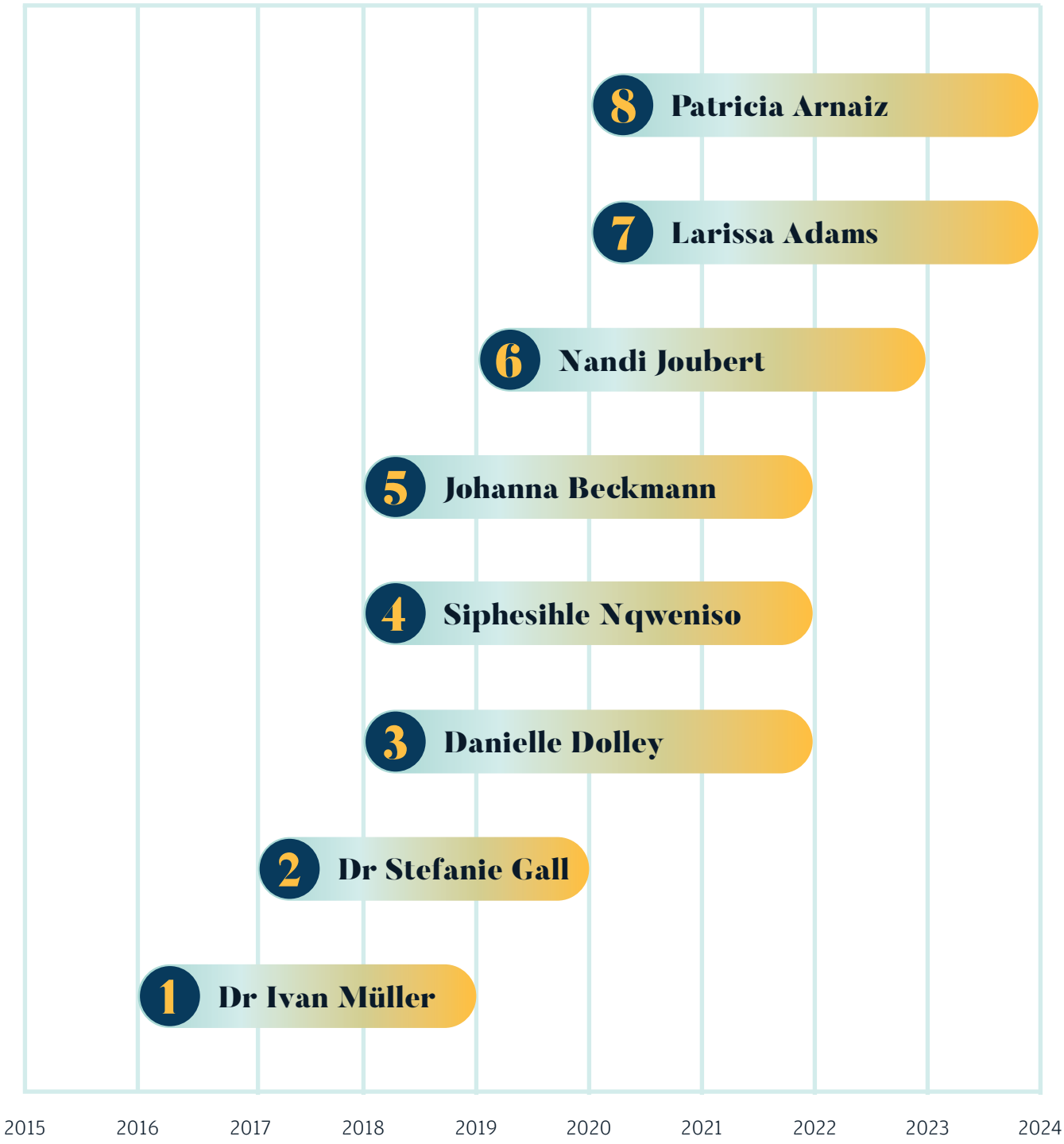
Scan this QR code to be directed to the KaziHealth page.


KAZICHAT


KAZIBANTU
Schools for Healthy Communities

PhD Theses

Below is a chronological overview of all team members who had the opportunity to write a scientific dissertation (completed and ongoing) in the following thematic scientific areas: **(1)** Education and Cognition, **(2)** Physical Activity and Fitness, **(3)** Health Interventions and Toolkits, **(4)** Quality of Life and **(5)** Physical Health.



Completed

1 **Dr Ivan Müller (April 2019):** Epidemiology of infectious and non-communicable diseases and effect of health interventions on children's physical fitness in Port Elizabeth, South Africa.

2 **Dr Stefanie Gall (September 2020):** Effects of a school-based health intervention and cross-sectional associations of schoolchildren's academic performance, selective attention and health-related quality of life in Port Elizabeth, South Africa.

Ongoing

3 **Danielle Dolley (2021):** Effects of a school-based health intervention on the non-communicable disease risk status of physical inactivity among schoolchildren from disadvantaged communities.

4 **Siphesihle Nqweniso (2021):** Growth, health and well-being of schoolchildren in Gqeberha: Impact of a physical activity and multi-micronutrient supplementation intervention.

5 **Johanna Beckmann (2021):** The effect of a school-based health intervention on nutritional status, cognitive function and soil-transmitted helminth infections and associated risk factors in three African countries.

6 **Nandi Joubert (2022):** Effects of a workplace health intervention programme on risk factors for non-communicable diseases, health behaviours and psychosocial health of teachers in marginalised communities of Gqeberha, South Africa.

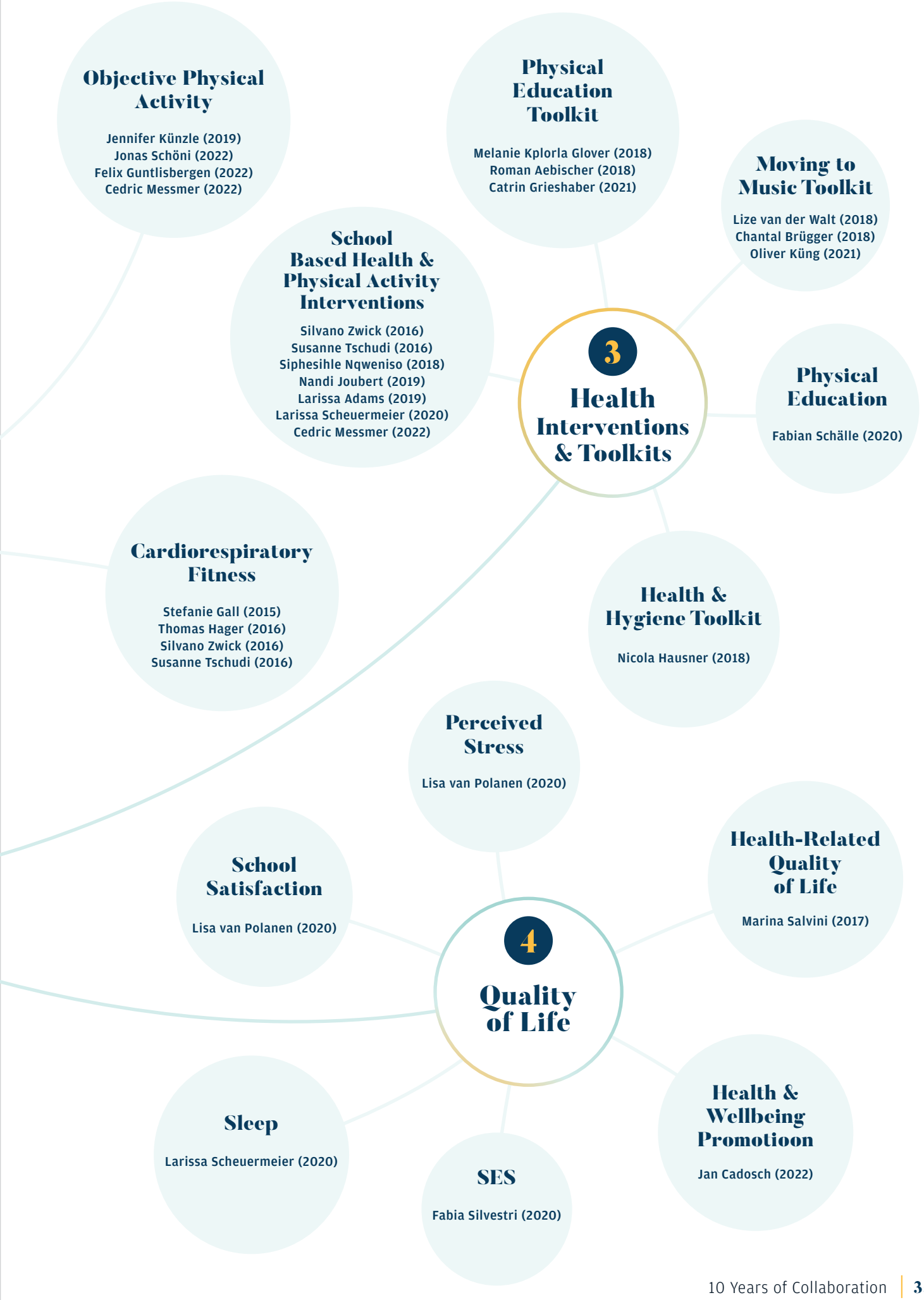
7 **Larissa Adams (2023):** Effectiveness of health promotion programmes on sustainable lifestyle changes amongst teachers working in schools from disadvantaged settings in Nelson Mandela Bay.

8 **Patricia Arnaiz (2023):** Sustainability of a school-based health promotion intervention in children at risk for non-communicable diseases in marginalised communities in Gqeberha, South Africa.

Dr Stefanie Gall with her PhD hat.

Ivan becomes Dr Ivan.


Post-graduate Theses
1
Education & Cognition
Attention
Stefanie Gall (2015)
Larissa Adams (2019)
Cognition
Stefanie Gall (2015)
Larissa Adams (2019)
Lisa van Polanen (2020)
Jonas Schöni (2022)
Academic Achievement
Stefanie Gall (2015)
Larissa Adams (2019)
Self Control
Stefanie Gall (2015)
Academic Self-Concept
Lisa van Polanen (2020)
Executive Function
Jonas Schöni (2022)
Educational Attainment Parents
Fabia Silvestri (2020)
2
Physical Activity & Fitness
Grip Strength
Nandi Joubert (2019)
Daniel Gordon (2020)
Self-reported Physical Activity
Marina Salvini (2017)
Felix Guntlisbergen (2022)
5
Physical Health
Blood Pressure
Nora Degonda (2019)
Cardiovascular Risk
Daniel Gordon (2020)
Felix Guntlisbergen (2022)
Body Composition
Dominique Bänninger (2015)
Siphesihle Nqweniso (2018)
Nandi Joubert (2019)
Jennifer Künzle (2019)


Objective Physical Activity
Jennifer Künzle (2019)
Jonas Schöni (2022)
Felix Guntlisbergen (2022)
Cedric Messmer (2022)
Physical Education Toolkit
Melanie Kplorla Glover (2018)
Roman Aebischer (2018)
Catrin Grieshaber (2021)
Moving to Music Toolkit
Lize van der Walt (2018)
Chantal Brügger (2018)
Oliver Küng (2021)
School Based Health & Physical Activity Interventions
Silvano Zwick (2016)
Susanne Tschudi (2016)
Siphesihle Nqweniso (2018)
Nandi Joubert (2019)
Larissa Adams (2019)
Larissa Scheuermeier (2020)
Cedric Messmer (2022)
3
Health Interventions & Toolkits
Physical Education
Fabian Schälle (2020)
Cardiorespiratory Fitness
Stefanie Gall (2015)
Thomas Hager (2016)
Silvano Zwick (2016)
Susanne Tschudi (2016)
Health & Hygiene Toolkit
Nicola Hausner (2018)
Perceived Stress
Lisa van Polanen (2020)
School Satisfaction
Lisa van Polanen (2020)
Health-Related Quality of Life
Marina Salvini (2017)
4
Quality of Life
Sleep
Larissa Scheuermeier (2020)
SES
Fabia Silvestri (2020)
Health & Wellbeing Promotioon
Jan Cadosch (2022)

Master Theses

1 Education & Cognition | 2 Physical Activity & Fitness | 3 Health Interventions & Toolkits | 4 Quality of Life | 5 Physical Health

Completed

5 **Dominique Bänninger (September 2015)**
Ein Vergleich von physischer Leistungsfähigkeit, Unter- beziehungsweise Übergewicht bei sozio-ökonomisch beeinträchtigten Primarschulkindern in Port Elizabeth, Südafrika – eine Feldstudie.

1 2 **Stefanie Gall (October 2015)**
Correlation between physical fitness, self-control, attention and academic achievement in socially disadvantaged schoolchildren aged 9-12 from Port Elizabeth, South Africa.

2 **Thomas Hager (April 2016)**
Kardiorespiratorische Fitness bei 9-12 jährigen Kindern aus sozioökonomisch benachteiligten Schulen in Port Elizabeth – ein internationaler Vergleich.

2 3 **Silvano Zwick (October 2016)**
Körperliche Leistungsfähigkeit vor und nach Intervention bei sozioökonomisch benachteiligten 8 bis 12-jährigen Schülerinnen in Port Elizabeth, Südafrika – eine Längsschnittuntersuchung.

2 3 **Susanne Tschudi (September 2016)**
Körperliche Leistungsfähigkeit bei 8 bis 12-jährigen sozio-ökonomisch benachteiligten Primarschülern aus Port Elizabeth, Südafrika – eine Längsschnittuntersuchung.

2 4 **Marina Salvini (April 2017)**
High self-reported physical activity is a strong indicator for high health-related quality of life among schoolchildren in poor neighbourhoods of Port Elizabeth, South Africa.

3 **Lize van der Walt (April 2018)**
The development of a «moving-to-music» toolkit in underprivileged primary schools in Port Elizabeth, South Africa and its personal and social benefits.

3 **Nicola Hausner (April 2018)**
Hygiene, health and sanitation awareness as part of developing and validating a Physical Education toolkit: contributing to personal and social well-being of children from Port Elizabeth, South Africa.

3 **Chantal Brügger (April 2018)**
The development of a «moving-to-music» toolkit for disadvantaged primary schools in Port Elizabeth, South Africa and its physical and psychological benefits.

3 **Melanie Kplorla Glover (April 2018)**
Development and setting specific validation of a children's Physical Education programme for disadvantaged South African primary school grades 1-3.

3 **Roman Aebischer (April 2018)**
Development of a setting specific comprehensive Physical Education programme for South African primary schools located in disadvantaged neighbour-hoods – grades 4-7.

3 5 **Siphesihle Nqweniso (April 2018)**
The effect of school-based physical activity interventions on body composition of grade 4 children from lower socio-economic communities in Port Elizabeth.

2 **Danielle Smith (April 2018)**
Physical fitness profile of primary schoolchildren from lower socio-economic communities in Port Elizabeth.

2 3 5 **Nandi Joubert (December 2019)**
Effect of a physical activity intervention on the physical fitness of primary schoolchildren in disadvantaged communities in Port Elizabeth.

Larissa Adams (December 2019)
Effect of school-based interventions on attention and academic performance of primary schoolchildren from lower socioeconomic communities in Port Elizabeth.

Nora Degonda (December 2019)
Associations between physical fitness and blood pressure among primary schoolchildren in different disadvantaged neighbourhoods of Port Elizabeth, South Africa.

Jennifer Künzle (December 2019)
Relation between physical activity patterns and body composition among primary schoolchildren in marginalized neighbourhoods of Port Elizabeth, South Africa.

Lisa van Polanen (April 2020)
Perceived stress, school satisfaction and academic self-concept before and after a physical activity intervention among 4th - 6th grade primary schoolchildren in marginalized neighbourhoods of Port Elizabeth, South Africa.

Fabian Schälle (April 2020)
The Relevance of Physical Education at schools in disadvantaged neighbourhoods of Port Elizabeth, South Africa.

Larissa Scheuermeier (October 2020)
Impact of physical activity on sleep. Findings of a physical activity intervention study among primary schoolchildren from marginalised neighbourhoods in Port Elizabeth, South Africa.

Fabia Silvestri (October 2020)
Einfluss der Bildung sowie des sozioökonomischen Status der Eltern auf die physische Aktivität ihrer Kinder in drei afrikanischen Ländern.

Daniel Gordon (December 2020)
Association between grip strength and cardiovascular risk among primary schoolchildren in three African countries.

Ongoing

Catrin Grieshaber (October 2021)
Development of a Physical Education toolkit for *KaziKidz* Grade R, validated based on the Namibian curriculum.

Olivier Küng (October 2021)
Expansion of a Moving-to-Music toolkit for *KaziKidz* Grade R, validated based on the Namibian curriculum.

Jonas Schöni (February 2022)
Correlations between physical activity, physical fitness and executive functions in primary schoolchildren from disadvantaged neighbourhoods in Port Elizabeth, South Africa.

Jan Cadosch (April 2022)
A SRF film documentation on the UniBas UNESCO Chair activities: Health and well-being promotion in marginalized neighbourhoods in South Africa.

Felix Guntlisbergen (April 2022)
Comparison of objective versus subjective measured physical activity and its association with different cardiovascular risk markers in South African schoolchildren.

Cedric Messmer (April 2022)
Effekte schulbasierter Interventionen auf die körperliche Aktivität von sozioökonomisch benachteiligten Primarschülern in Port Elizabeth.

Timo Kellenberg (October 2022)
Effekt einer schulbasierten Gesundheitsintervention auf das psychische Wohlbefinden von sozioökonomisch benachteiligten Kindern aus Tanzania, Südafrika, und Côte d'Ivoire – eine Längsschnittuntersuchung.

Janis Brügger (October 2022)
Der Einfluss körperlicher Fitness auf den Schlaf bei Kindern – Längsschnittbefunde einer schulbasierten Gesundheitsintervention in Tanzania, Südafrika und Côte d'Ivoire.

Conferences & Posters

The results of our collaborative studies have been presented at the following national and international conferences:

South African Association of Health Educationalists (SAAHE) March 2016, Gqeberha, South Africa: *"Soil-transmitted helminth and children's cardio-respiratory fitness in disadvantaged schools – the DASH study, Port Elizabeth, South Africa"* by Prof Dr Cheryl Walter.

Research team after various successful presentations at the Life Through Movement International Conference (LTMIC) held in 2018 in Gqeberha, South African. From left: Danielle Dolley, Siphesihle Nqweniso, Johanna Beckmann, Nandi Joubert, Dr Stefanie Gall, Larissa Adams, and Dr Christin Lang.

Poverty Alleviation Forum July 2016, Gqeberha, South Africa: *"The DASH study and Schoolchildren's Health"* by Prof Dr Cheryl Walter.

Physical Activity and Sport Conference (CIAPSE) October 2016, Jyväskylä, Finland: *"Disease, Activity and Schoolchildren's Health (DASH) in Township Communities in Port Elizabeth, South Africa: Baseline Results",* keynote by Prof Dr Uwe Pühse.

UNESCO July 2017, Paris, France: *"KaziBantu Study Results"* by Prof Dr Uwe Pühse.

***DASH* Symposium** October 2017, Gqeberha, South Africa: Various presentations by the *DASH* project members.

Eastern Cape Basic Department of Education (Mr. Earnest Grogonzola) February 2018, Gqeberha, South Africa: "*KaziBantu* Study Results" presented by Prof Dr Cheryl Walter.

Eastern Cape Basic Department of Health March 2018, Gqeberha, South Africa: *"Epidemiology of infectious diseases on children's physical fitness in Port Elizabeth, South Africa"* by Prof Dr Uwe Pühse.

Yokohama Conference September 2020, Yokohama, Japan: *"Building a diverse society through sport, physical activity and Physical Education – The activities of the UNESCO Chair on Physical Activity and Health in Educational Settings",* keynote by Prof Dr Uwe Pühse.

Yokohama Conference September 2020, Yokohama, Japan: *"Supporting the Teaching of Quality Physical Education in Poor-resourced Schools in South Africa"* by Prof Dr Cheryl Walter.

International Federation of Physical Education Conference (FIEP) September 2018, Istanbul, Turkey: *"The KaziKidz toolkit – a holistic educational and instructional tool for primary school teachers",* keynote by Prof Dr Uwe Pühse.

International Federation of Physical Education Conference (FIEP) September 2018, Istanbul, Turkey: *"Effect of a 20-week physical activity intervention on selective attention and academic performance in children living in disadvantaged neighbourhoods",* poster by Dr Stefanie Gall.

Life Through Movement International Conference (LTMIC) October 2018, Gqeberha, South Africa: *"Life through movement – in marginalized settings: The KaziBantu Project",* keynote by Prof Dr Uwe Pühse.

SASMA BRICSCESS Conference October 2019, Cape Town, South Africa: *KaziBantu* Dissemination Workshop in Cape Town, various participants from the *KaziBantu* and *KaziAfya* team.

25th Annual European College of Sport Science (ECSS) Congress October 2020, Sevilla, Spain: *"Association between physical activity, cardiorespiratory fitness and clustered cardiovascular risk in South African children from disadvantaged communities: results from a cross-sectional study"* by Dr Ivan Müller et al.

Awards

The following awards were received during our many years of cooperation:

aha!award 2016 to Benjamin Wegenstein, Dr Oliver Brandt and Dr Ivan Müller: "Prevalence of sensitisation to common allergens and atopic diseases among schoolchildren in Port Elizabeth, South Africa" (2016, Berne, Switzerland).

Engagement Excellence Award, from the Nelson Mandela University, endowed 15'000 ZAR to Prof Cheryl Walter (July 2017, Gqeberha, South Africa).

Poster Award from the International Federation of Physical Education Conference (FIEP) to Dr Stefanie Gall: "Effect of a 20-week physical activity intervention on selective attention and academic performance in children living in disadvantaged neighbourhoods" and Uwe Pühse received the **Outstanding Oral Presentation Award** for his lecture entitled: "*DASH* – the impact of a Physical Education intervention on schoolchildren in townships in Port Elizabeth, South Africa" (September 2018, Istanbul, Turkey).

Merit award in the category "Health Education and Health Promotion" at the 4th Commonwealth Digital Health Awards 2020 for the *KaziHealth* mobile App to Prof Darelle van Greunen and team (November 2020, Geneva, Switzerland).

Innovation Excellence Project Award, from the Nelson Mandela University to Prof Darelle van Greunen and team (December 2020, Gqeberha, South Africa).

Prof Dr Cheryl Walter receiving the Engagement Excellence Award from Prof Dr Andrew Leitch

Dr Stefanie Gall receiving the award for the best poster and Prof Dr Uwe Pühse receiving the award for an outstanding oral presentation at the International Federation of Physical Education Conference

Media

Over the course of the years our project appeared several times in newspapers, and other media outlets. See below for a selection of articles.

Press Coverage

The Herald – NMMU in big takkie drive for schools (August 2015)

Die Burger – Leerders se gesondheit bekyk (February 2015)

Unibas Magazine UNI NOVA – Little appetite for study on an empty stomach (September 2015)

Dispatch LIVE – Worms partly responsible for lower academic results among children (May 2017)

Basellandschaftliche Zeitung – Basler Forscher verbessern die Lebensbedingungen von benachteiligten Kindern in Südafrika (September 2017)

SABC News – *KaziBantu* project focuses on schoolchildren's health (October 2017)

Unibas News – Gesündere Schulkinder in den Townships Südafrikas (November 2017)

Embassy of Switzerland – Swiss-South Africa Joint Research Programme (SSAJRP): 2008-2018 (December 2018)

The Herald – Make school physical activity compulsory (March 2019)

Unibas News – First UNESCO Chair for the University of Basel (May 2019)

Unibas BEAST Blog – *KaziBantu* - Wenn eine Masterarbeit zur Herzensangelegenheit wird (July 2019)

Nelson Mandela University Magazine "Thetha" – Fast Track to Health (June 2019)

OECD Learning Compass 2030 – Prof Dr Uwe Pühse on Physical and Mental Health (October 2019)

Article in the Sunday Times – Overweight Teachers on Fitness Watch (November 2019)

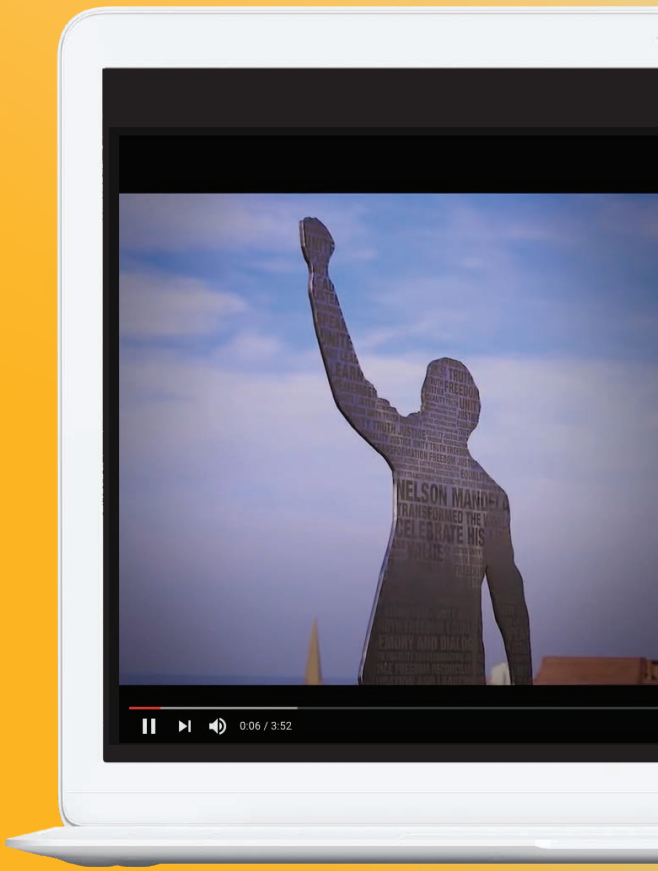
Video Footage

KaziBantu **–** Healthy Schools for Healthy Communities. 2017 onwards (August 2018)

DASH **Documentary** (June 2016)

The *KaziBantu* Project – An Overview
(March 2020)

KaziKidz **Cartoons**
(December 2019)

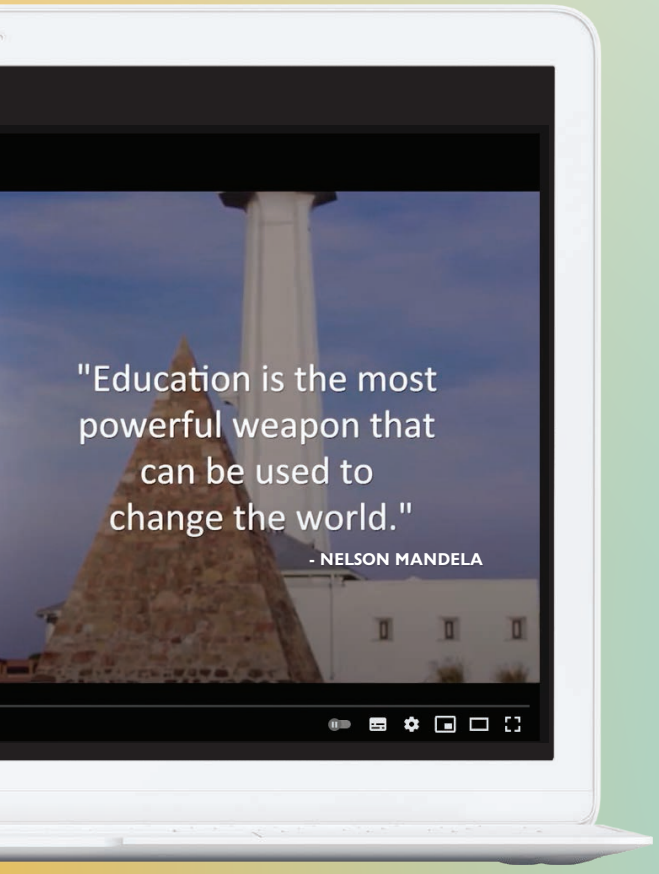


SASMA BRICSCESS Conference
Cape Town, South Africa
(October 2019)

See all our videos on our Youtube Channel

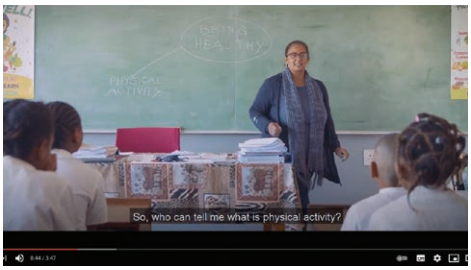
***DASH* Teacher Awards** (June 2018)

***KaziKidz* Teaching Material at the Schools** (December 2018)



Pilot Testing of the *KaziKidz* Teaching Material (December 2018)

***KaziHealth*: Teacher's Health Promotion Programme** (October 2019)



Healthy Schools for Healthy Communities (August 2019)

Impressions

During our 10 years of exchange, we have always understood our collaborations as mutual learning, getting to know different and interesting cultures, and trying to combine the strengths of every individual to work together as a team – achieving a shared goal. The exchange has always been enriching, not only from a professional point of view, but personally also giving us the opportunity to encounter unique and fascinating people. Many little stories have emerged during our collaboration. Here is a small visual selection of them; the following pictures try to document the social exchange in the cooperation between the UniBas and Mandela University team during the past 10 years.

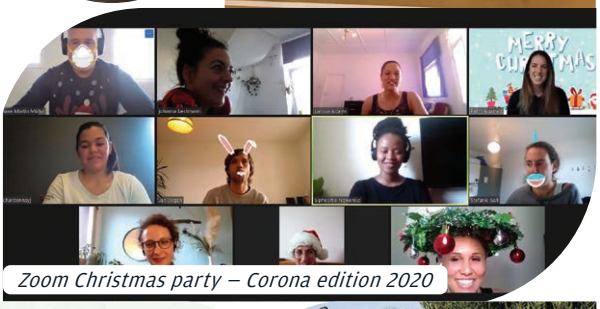
Impressions At Work: Our Team

Team dinners

The team at the HMS department

KaziKidz in action in Senegal

Conference presentations



Zoom Christmas party – Corona edition 2020

1st publication of the KaziKidz manuals

Beach hike in Gqeberha

4 Master Students from NMU in Basel

Testing at Hillcrest Primary, Gqeberha

Team Centre for Community Technologies, NMU

Meeting at UNESCO Headquarter Paris with Novartis Foundation

First Partner School Sapphire Road Primary Dr Bruce Damons

Teacher Workshop

Master Students from UniBas in Gqeberha

Research Team with Gail Halforty

Laboratory Research Team Medical Laboratory Science NMU

BRICSCESS Conference Research Team, CapeTown

KaziAfya Study Kick-Off in Basel

KaziBantu Data Assessment Kick-Off in Gqeberha

Fieldwork

Break time is play time with the KaziCoach

Fitness testing at school

Let there be colour! Painted games at the Kazi schools

Teachers' session with the KaziCoach

KaziKidz consist of more than 2 000 children

Women power!

Kids love the Kazi cartoons

Can't be late for school visits

Interviews with KaziHealth teachers

Healthy School Meals at Project School

Preparing accelerometers

Stop the Shooting painting

KaziKidz Intervention Schoolchildren

BASA Conference Prof Pühse in South Africa

Conference in Cape Town Dr Ann Aerts

Healthy School meals at Project School

Parasitological assessment

Physical activity on schoolyard

Conference in Cape Town Prof Cheryl Walter

Collaboration Meeting with ECDEoE

First visit to the Nelson Mandela University

Behind the scenes: What we do in Switzerland

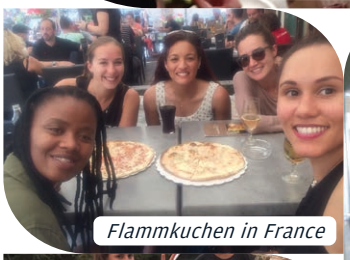

Braai'ing in Switzerland


Rhine swimming in Basel


2019 World Cup Rugby final in Switzerland

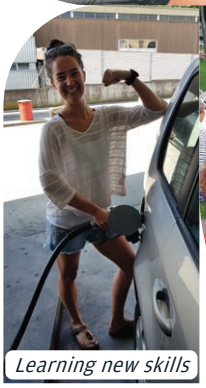

Grindelwald hike


Pizza in Italy


Flammkuchen in France


Arrival in Switzerland – first overseas trip for South Africa students


Thun to Bern float


Learning new skills


Herbstmesse in Basel

Behind the scenes: What we do in South Africa

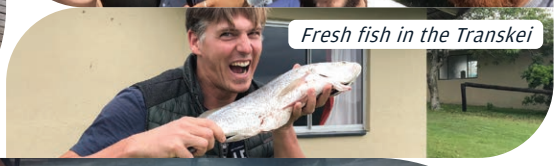

Fondue in South Africa


Live rugby in Gqeberha


Load shedding sucks!


Celebrating Swiss National day in South Africa on 1 August 2019

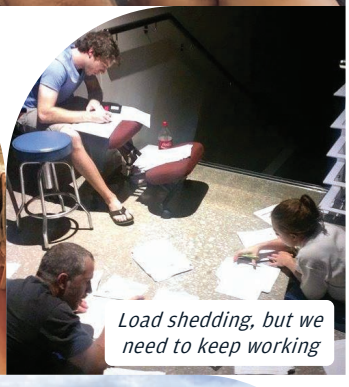
Which is best? The debate continues


Fresh fish in the Transkei


Beach horse riding in Gqeberha

Surfing the Gqeberha swell


Our project coordinator, Ivan, turns 40 in South Africa


Load shedding, but we need to keep working

Brochures

DASH – *KaziBantu* Brochure (September 2017)

KaziKidz **and** ***KaziHealth*** – The *KaziBantu* Dissemination Brochure (September 2019)

Hands-On Brochure for Primary School Teachers –
The Relevance of Physical Education (March 2020)

Scan this QR code to be directed to the brochure.

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References, Guidelines & Policies

Our collaboration activities are based on the following references and evidence:

Amnesty International (2020). Broken and Unequal: The State of Education in South Africa. London: Amnesty International Ltd.

De Villiers, A., Steyn, A., Draper, C., Fourie, J., Barkhuizen, G., Lombard, C et al. (2012). 'HealthKick': Formative assessment of the health environment in low-resource primary schools in the Western Cape Province of South Africa. BMC Public Health, 12(1):794.

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Additionally, all our activities are oriented towards the following national and international policies:

- Curriculum Assessment Policy Statements (CAPS)
- The Continuing Professional Management System, South African Council for Educators (SACE) 2012
- South Africa's Integrated School Health Policy 2012
- South Africa's National Youth Policy 2015-2020
- National Adolescent and Youth Health Policy 2017
- WHO Global Strategy for Women's, Children's and Adolescent's Health 2016-2030
- Strategy for the Prevention and Control of Obesity in South Africa 2015-2020
- Strategy: Roadmap for Nutrition in South Africa 2013-2017

Appendix: Publications

Yap, P., Müller, I., Walter, C., Seelig, H., Gerber, M., Steinmann, P., Damons, B., Smith, D., Gall, S., Bänninger, D., Hager, T., Htun, N., Steenkamp, L., Gresse, A., Probst-Hensch, N., Utzinger, J., Du Randt, R. and Pühse, U. (2015). Disease, activity and schoolchildren's health (*DASH*) in Port Elizabeth, South Africa: a study protocol BMC Public Health. Visit the publication **here**.

Müller, I., Beyleveld, L., Gerber, M., Pühse, U., du Randt, R., Utzinger, J., Zondie, L., Walter, C. & Steinmann, P. (2016). Low efficacy of albendazole against Trichuris trichiura infection in schoolchildren from Port Elizabeth, South Africa. Transactions of the Royal Society of Tropical Medicine and Hygiene. Visit the publication **here**.

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Salvini, M., Gall, S., Müller, I., Walter, C., du Randt, R., Steinmann, P., Utzinger, J., Pühse, U. & Gerber, M. (2017). Physical activity and health-related quality of life among schoolchildren from disadvantaged neighbourhoods in Port Elizabeth, South Africa. Quality of Life Research. Visit the publication **here**.

Müller, I. (2017). Epidemiology of infectious and non-communicable diseases and effect of health interventions on children's physical fitness in Port Elizabeth, South Africa. Doctoral Thesis, University of Basel, Faculty of Science. Visit the publication **here**.

Müller, I., Gall, S., Beyleveld, L., Gerber, M., Pühse, U., du Randt, R., Steinmann, P., Zondie, L., Walter, C., Utzinger, J. (2017). Shrinking risk profiles after deworming of children in Port Elizabeth, South Africa, with special reference to Ascaris lumbricoides and Trichuris trichiura. Geospatial Health. Visit the publication **here**.

Htun, N., Odermatt, P., Müller, I., Yap, P., Steimann, P., Schindler, C., Gerber, M., du Randt, R., Walter, C., Pühse, U., Utzinger, J., Probst-Hensch, N. (2018). Association between gastrointestinal tract infections and glycated hemoglobin in schoolchildren of poor neighbourhoods in Port Elizabeth, South Africa. PLOS Neglected Tropical Diseases. Visit the publication **here**.

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Müller I., Smith D., Adams L., Aerts, A., Damons, B., Degen, J., Gall, S., Gani, Z., Gerber, M., Gresse, A., van Greunen, D., Joubert, N., Marais, T., Nqweniso, S., Probst-Hensch, N., du Randt, R., Seelig, H., Steinmann, P., Utzinger, J., Wadhwani, C., Walter, C., and Pühse, U. (2019). Effects of a School-Based Health Intervention Programme in Marginalized Communities of Port Elizabeth, South Africa (the *KaziBantu* Study): Protocol for a Randomized Controlled Trial. JMIR Research Protocols. Visit the publication **here**.

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Gall, S. (2020). Effects of a school-based health intervention and cross-sectional associations of schoolchildren's academic performance, selective attention and health-related quality of life in Port Elizabeth, South Africa. Doctoral Thesis, University of Basel, Faculty of Medicine. Visit the publication **here**.

Gerber, M., Ayeko , S. A., Beckmann, J., Bonfoh, B., Coulibaly, J. T., Daouda, D., du Randt, R., Finda, L., Gall, S., Mollel, G. J., Lang, C., Long, K. Z., Ludyga, S., Masanja, H., Müller, I., Nqweniso, S., Okumu, F., Probst-Hensch, N., Pühse, U., Steinmann, P., Traoré, S. G., Walter, C. and Utzinger, J. (2020). Effects of school-based physical activity and multi-micronutrient supplementation intervention on growth, health and well-being of schoolchildren in three African countries: the *KaziAfya* cluster randomised controlled trial protocol with a 2 × 2 factorial design". Trials. BioMed Central, 21(1), p. 22. Visit the publication **here**.

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Smith, D., Walter, C., du Randt, R., Pühse, U., Bosma, J., Aerts, A., Adams, L., Arnaiz, P., Degen, J., Gall, S., Joubert, N., Müller, I., Nienaber, M., Nqweniso, S., des Rosiers, S., Seelig, H., Steinmann, P., Utzinger, J., Gerber, M. (under review): Prevalence of clustered cardiovascular risk and its association with cardiorespiratory fitness and physical activity among South African primary schoolchildren from disadvantaged schools.

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