

Faculty of Health Sciences

*Caring for tomorrow*



# PasSPORT to Health

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# Outline of Presentation

- The Context
- The PasSPORT to Health Project:
  - student-community engagement initiative
- A case study



# WHO Recommendation: 60 minutes of Moderate-to-Vigorous Physical Activity (MVPA)



## Physical activity is an important component of a healthy lifestyle.

Benefits of physical activity and exercise for children include:

- Improve cardiovascular fitness (heart and lungs)
- Achieve and maintain a healthy weight
- Build strong bones and muscles
- Maintain and develop flexibility
- Improve posture and balance
- Help relaxation
- Better sleep
- Improve concentration
- Boost self-esteem and confidence
- Opportunities to make friends and enhance social skills

benefits

## Recommended levels of physical activity for children

Physical activity includes play, games, sport, transportation, recreation, physical education or planned exercise, in the context of family, school, and communities.

For optimal health, children should

- Try to do at least 60 minutes of moderate to vigorous-intensity physical activity daily,
- Most physical activity should be aerobic, such as brisk walking and running.
- Vigorous-intensity activities should be incorporated, as well as weight bearing activities such as push-ups, sit-ups, squats and lunges, at least 3 times per week.

recommendations

## SA Children

- Recent studies in South Africa show unsatisfactory levels of overweight and obesity, and physical inactivity among children.
- Healthy Active Kids SA 2010 Report Card: 20% are overweight or obese and 58% are insufficiently active.



**Moderate-intensity activity:** equivalent to brisk walking (the heart will beat faster than normal, and breathing will be harder than normal)

**Vigorous-intensity activity:** equivalent to running (the heart will beat much faster than normal and breathing will be much harder than normal)



# D- grade



At best only 50% of learners are active enough & obesity rates are on the rise.

More than half of children do not have access to recreational facilities.

Children watch almost 3 hrs hours of TV per weekday and even more on weekends.

More than 2/3 of adolescents eat fast food at least 3 times a week; and as a nation, South Africans drink 3 x the global average of certain soft drinks.

# Health of the Nation Study



## PHYSICAL FITNESS OF SOUTH AFRICAN PRIMARY SCHOOL CHILDREN, 6 TO 13 YEARS OF AGE: DISCOVERY VITALITY HEALTH OF THE NATION STUDY<sup>1,2</sup>

MIRANDA E. G. ARMSTRONG, ESTELLE V. LAMBERT, MICHAEL I. LAMBERT  
UCT/MRC Research Unit for Exercise Science and Sports Medicine Department of Human Biology University of Cape Town

- 10 000 children, five provinces, across socioeconomic levels
- **Research revealed great disparity between social classes and ethnic groups**
- White children fared better than children of mixed ancestry, who fared better than black children
- **A reflection and consequence of past imbalances resulting from apartheid and present practices**

- **Important part of NMMU's VISION 2020**

- Contribute to the **transformation and development of our communities**.

- **Important part of the Faculty of Health Sciences' Vision**

- Contribute to **building healthy communities** who benefit from transformative and innovative education and teaching from a Faculty that is **responsive to societal imperatives**

- **6 core values of NMMU**

- **Respect for diversity**
- **Excellence**
- **Ubuntu**
- **Integrity**
- **Respect for the natural environment**
- **Taking responsibility**

# B.HMS Curriculum

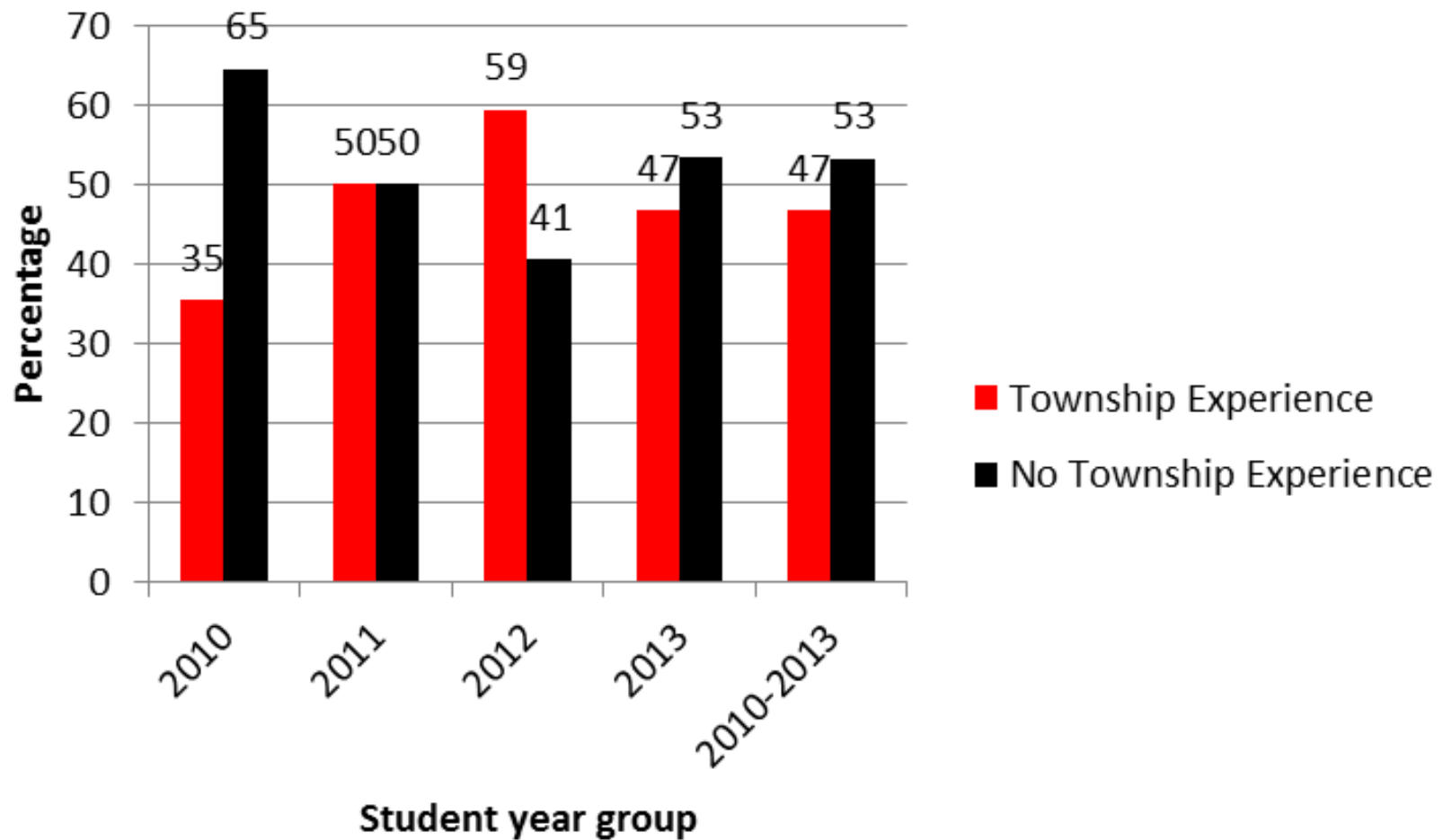
## ■ Specialization Modules:

- Exercise Science
- Sport Management
- Recreation
- Specific Sport

**Experiential Learning /160 hours**

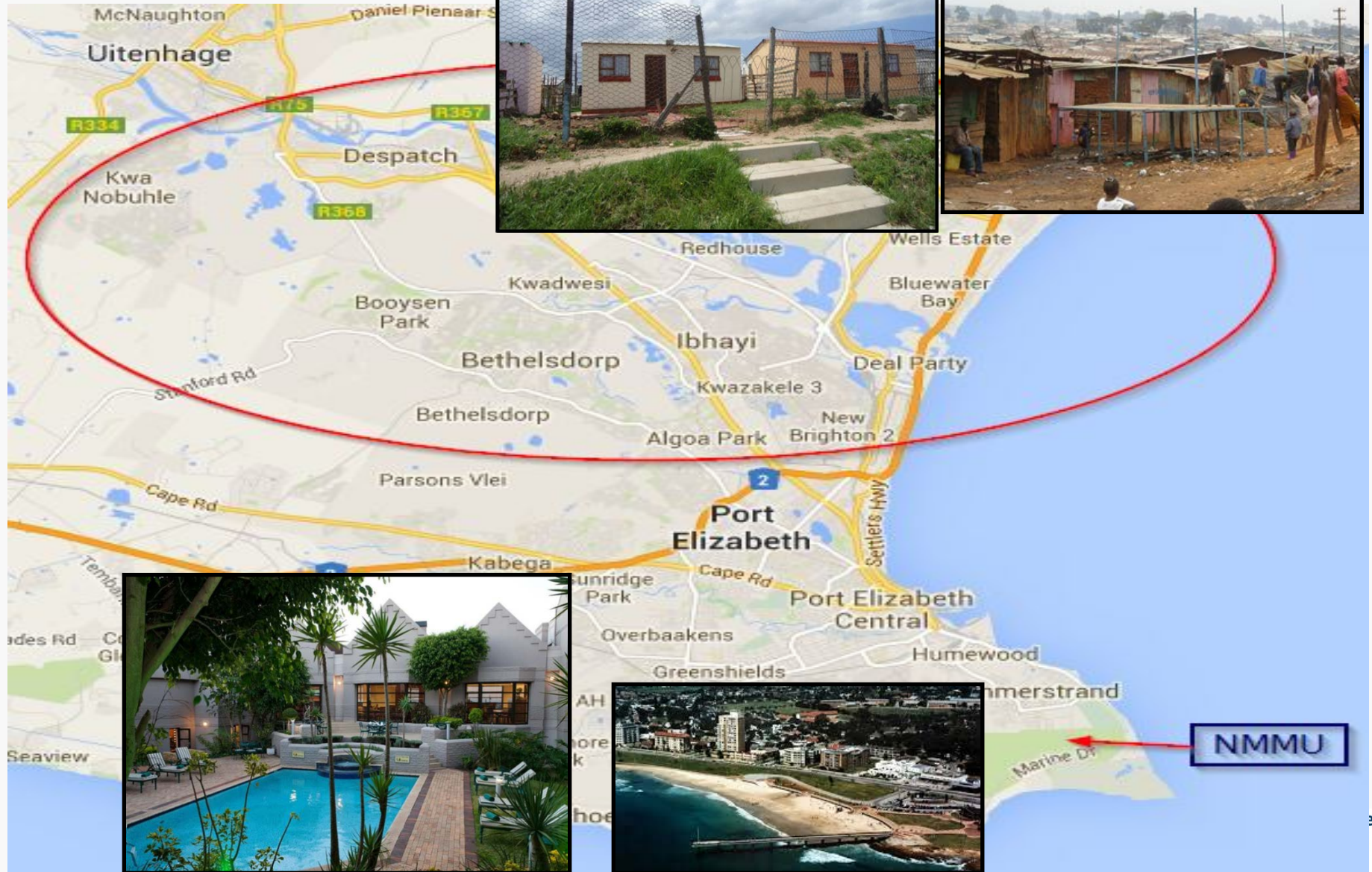


# HMS student's township experience (n=109)





# A Divided City

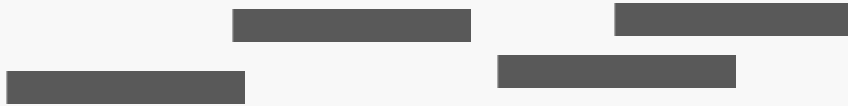


# Advantaged Schools

# Disadvantaged Schools

# Advantaged Schools

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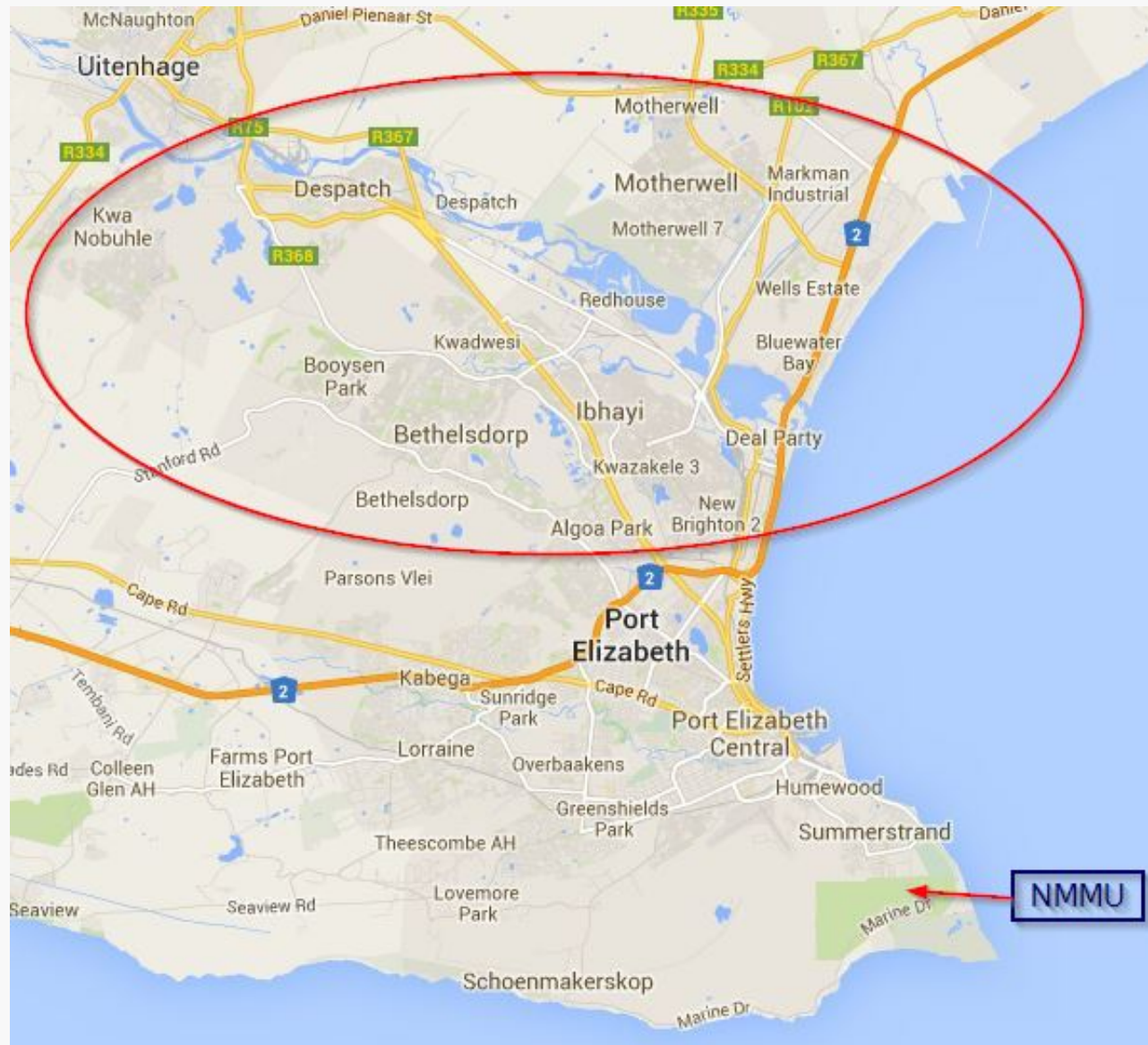


- PE offered at most schools
- Extramural sport from 14:00 – 17.00 most days of the week
  - Teams A, B, C, D .....
- Saturday school matches

- PE not offered in a structured or regular basis
- Few/no qualified PE teachers
- Irregular extramural sports programme
  - Team A



# A challenge





**Taken out of  
comfort zone**

**Confronted with  
real challenges**

**Put theory  
into practice**

**Conduct  
needs analysis**

**Draft  
funding proposal**

**Obtain  
sponsorship**



**Aim: Promoting Physical Activity and School Sport at disadvantaged schools**  
Project Leader: Dr Cheryl Walter • Department of Human Movement Science • tel: 041-5042628 email: cheryl.walter@nmmu.ac.za

**Where?**

2010 schools: Eriwewezini, Booyens Park, Malabar  
2011 schools: Sapphire Road, Charles Duma, Machiu  
2012 schools: Nkululekho, St James, Woolthope

**How?**

Human Movement Science students, as part of their experiential learning, obtain sponsorships, research and implement interventions to promote physical activity and school sport at selected disadvantaged schools.

**Before**



**Process**



Marking, painting, digging, drilling, hammering... transforming schools

HMS students conduct leadership camps for prefects, facilitate sports coaching, and promote exercise for health at schools.

**RESEARCH:**

- ▶ Children's physical activity
- ▶ Low-cost interventions aimed at promoting physical activity



**After**



HMS students together with teachers and parents create physical activity-friendly environments... bringing much joy

**Research  
interventions**

**Implement  
interventions**

**Facilitate sports  
coaching**

**Leadership camps  
for prefects**

**Project  
evaluation**

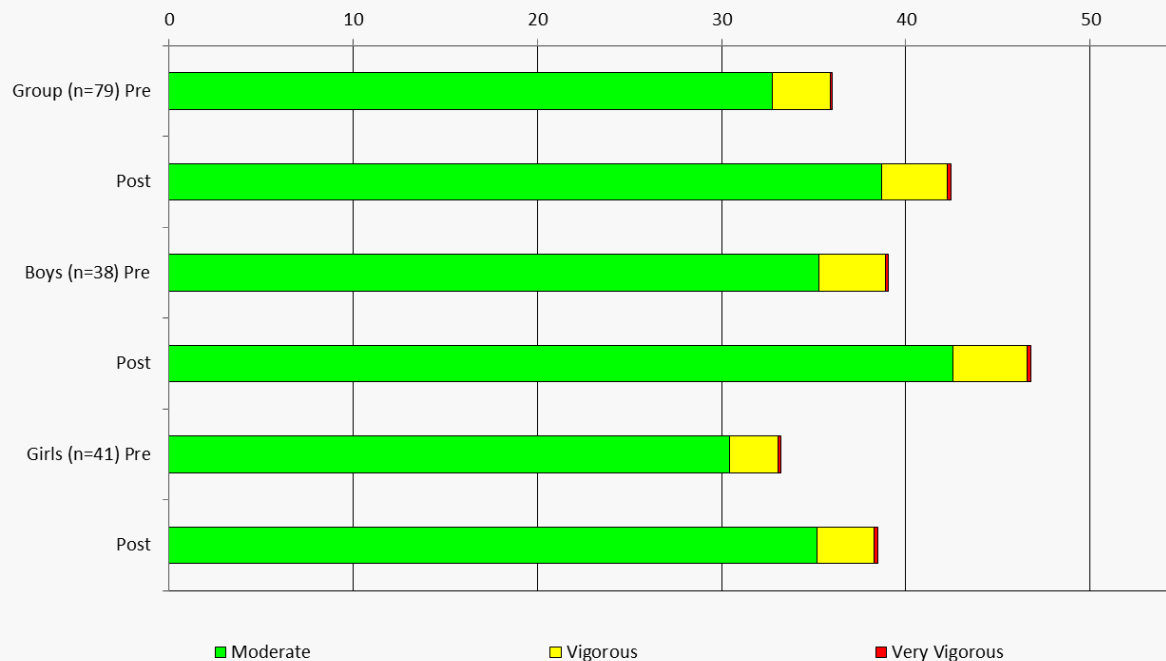
**Self  
reflection**

# Intervention: Low-cost physical activity-friendly environment



# Research: Children's Physical Activity

- The effect of a low-cost physical activity intervention in increasing moderate-to-vigorous (MVPA) in a school day
- Physical activity was measured using ActiGraph accelerometers
- Full school day MVPA: Pre/post intervention





# Feedback from staff

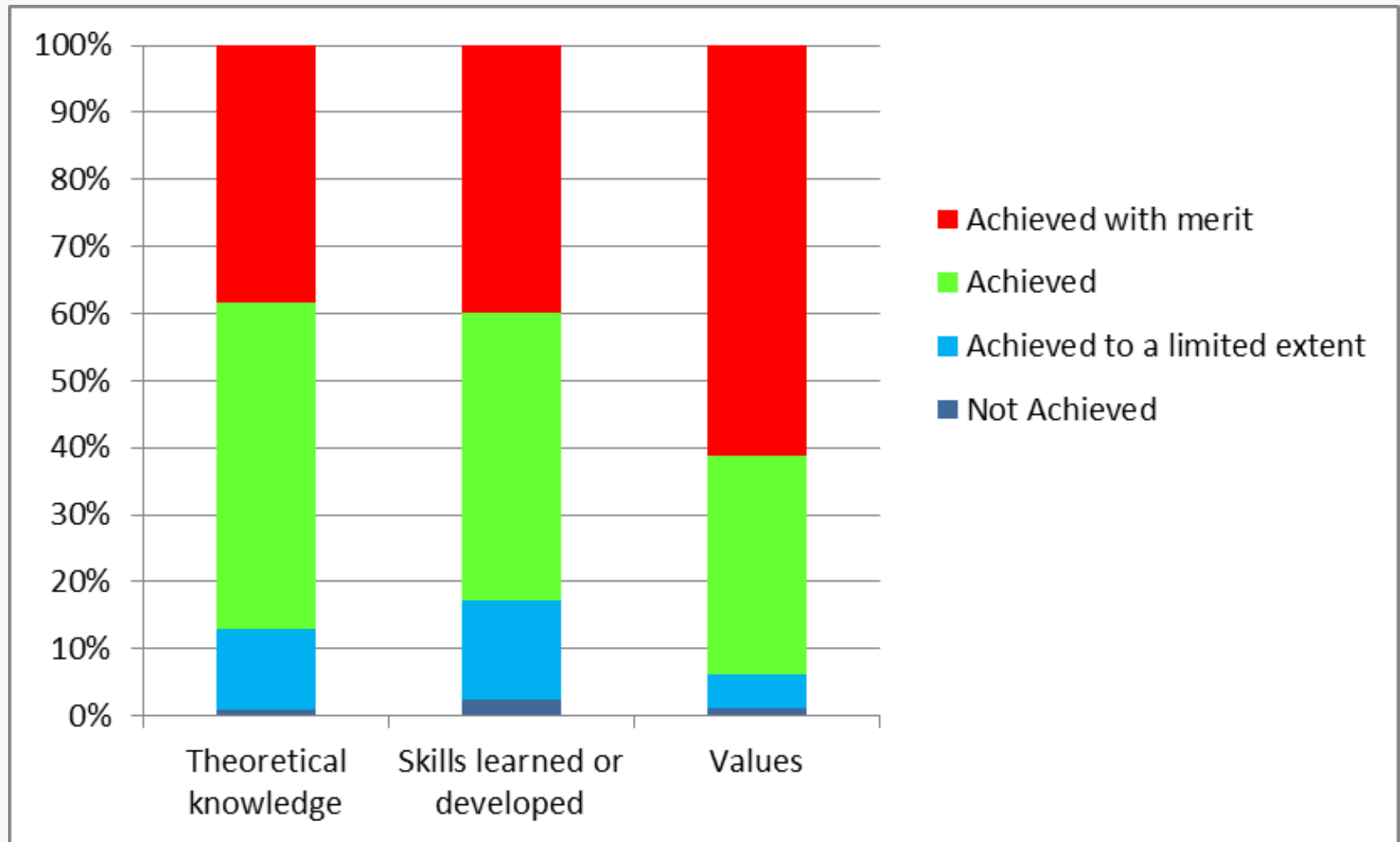
## ■ Feedback from staff

- “our school looks like a **real school** now”
- “our school is **bright, colourful and happy**”
- “the **girls** are playing so much more now”
- “it is good to see children **play** and have **fun**”
- “learners are **coming to school earlier** to play before school starts”
- “learners are getting rid of **excess energy** during break-time and are better able to concentrate in class”.

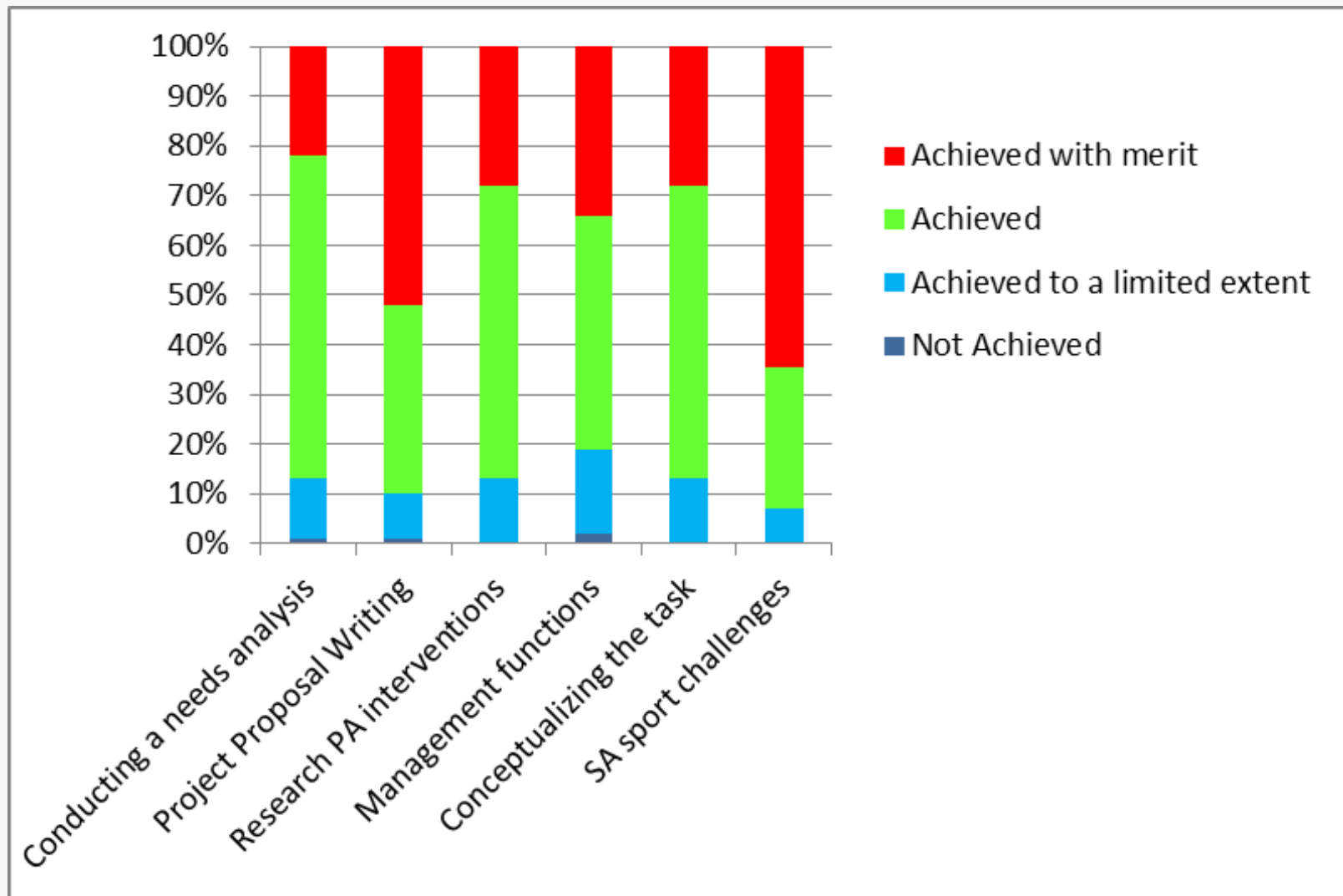
**NB!! Teachers reported using the sports equipment and activity stations in the PE component of their Life Orientation lessons**



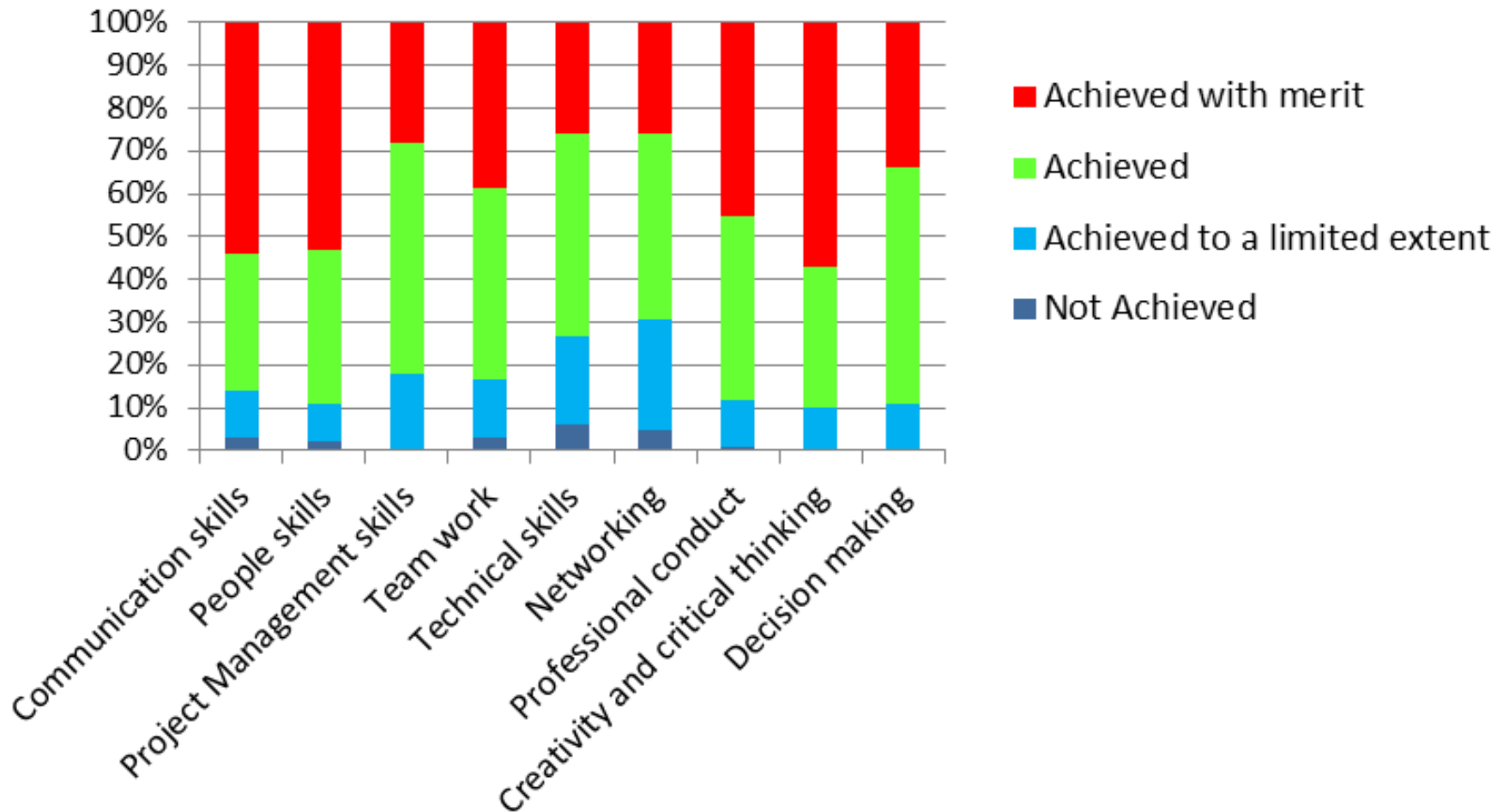
# Contribution of project to student growth and development 2010 – 2013 (n=109)



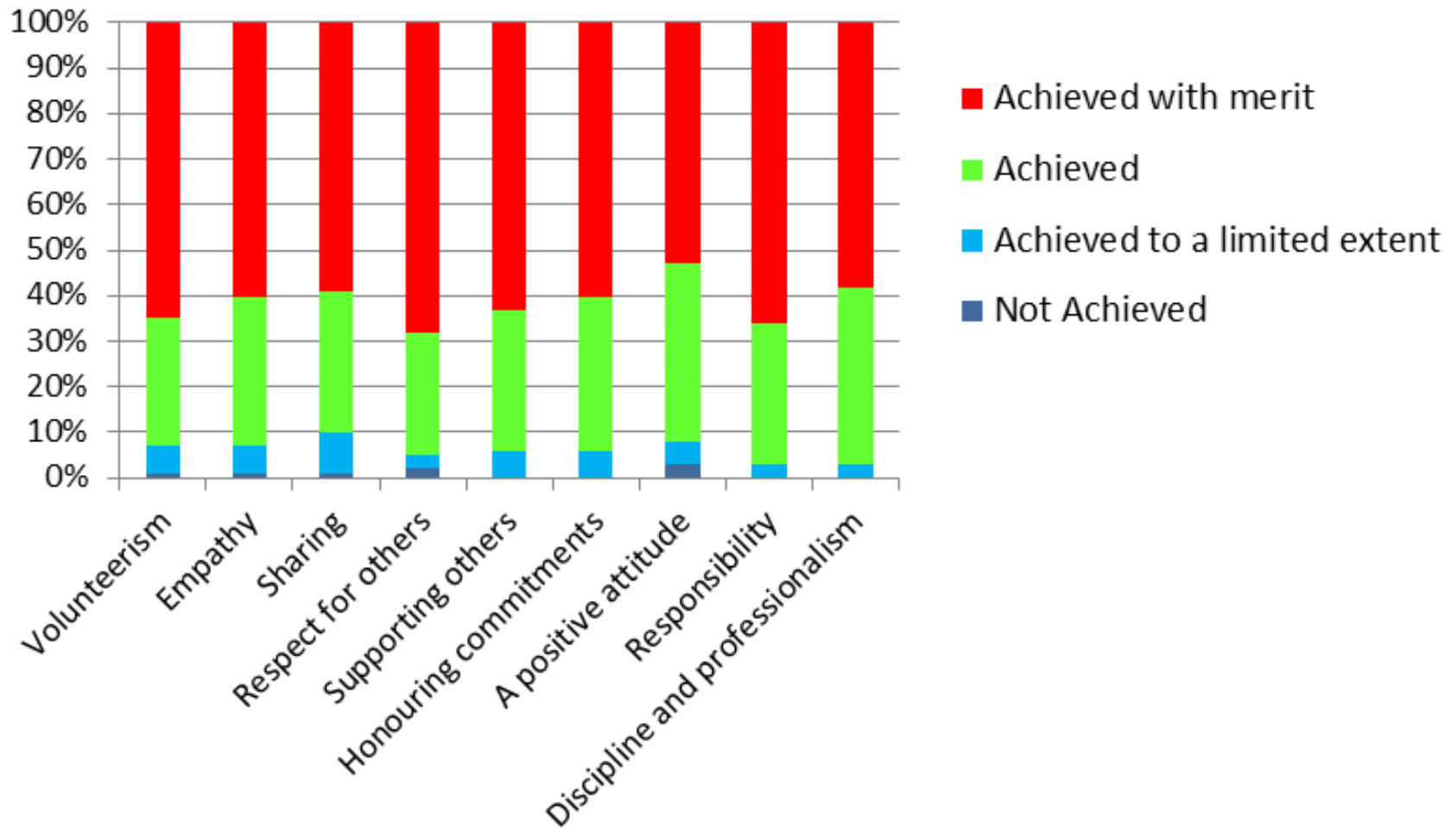
# Theoretical Knowledge (n=109)



# Skills Learned or Developed (n=109)



# Values (n=109)





# Student responses

- “Each individual experiences a variety of things that a textbook or sitting in lectures won’t teach you. This is hands on which defines you as a person”
- “This project made us realise what will be waiting for us in the real world”
- “We’ve learned how to work as a team, and respect one another. We had to honour our commitments to the group and fulfil our responsibilities...”
- “It showed me that working in a group takes a great amount of patients(sic) and you also need to put your foot down and stand your ground in certain instances”
- “I could have learnt more but it was my own doing. I could have taken charge in more of the planning”

# 2013 schools





# Case Study:



# The first visit ... litter ... broken windows ... broken doors ...holes in ceilings...no staff room ...



- *“Our school has been vandalized and we would really like the community to get more involved and support us....Your project would be beneficial for our L.O teachers and help us to improve our pupil’s fitness level.”*

principal

- **The schools’ attempts**
  - Improved security – fencing
  - Caretakers’ cottage on premises
  - Garden started
  - Selected teachers painted their class rooms at their own expense
  - Award winning choir



# Spring day clean-up

- 800 litres of paint sponsored, 12 trees and some shrubs
- 5 teachers and more than 100 children came for the Spring Day clean-up: scrapping, painting ...
- Principal and mothers cooked a meal for everyone



# A transformed School





# Conversion of derelict classroom into an improvised “gym”



# The improvised “gym”





# The improvised “gym”





CARDIO

NO  
HANGING

COOL  
DOWN

H<sub>2</sub>O

EDUCATI

MUSCLE  
STRENGTH

RI  
SE







Leëders van die Hoërskool Nkululeko in Kwanobuhle, Uitenhage, oefen op 'n geïmproviseerde toerusting in hul "opelug-gimnasium". Mardivan Fills (20), 'n derdejaarsstudent in menslike bewegingskunde aan die Nelson Mandela Metropolitaanse Universiteit (NMMU), maak Athenskesi Qekema (17), 'n gr. 9-leerder, tuiwys. Langs hulle is Luthemba Busaka (20) en agter hulle oefen Khanya Mpenzana (20). Albei is in gr. 11. Foto: WERNER HILLS



Hierdie ou klaskamer van die Hoërskool Nkululeko in Kwanobuhle is vroeër vanjaar nog as 'n pakkamer gebruik waar in stukke skoolbank opgestap is. Foto: VERSKAF

Derdejaarsstudente in menslike bewegingskunde aan die Nelson Mandela Metropolitaanse Universiteit maak die vervalle ou pakkamer skoon om dit as gimnasium vir die leëders van die Hoërskool Nkululeko in te rig. Foto: VERSKAF



Die 17-jarige Sandile Butana (17) wys sy boksverruf met die slaan sak terwyl nuuskierige leëders van die skool by die steeds stukkelende vensters van die nuwe gimnasium inloer. Die vensters en dak is nie herstel nie sodat die gimnasium 'n opeluggevoel het. Foto: WERNER HILLS

BURGER (Oos Kaap), Saterdag  
10 Nov 2012, p.7

## Studente prakseer gimnasium in skool

Ilse Krige

UITENHAGE. – Van pakkamer tot oefenplek, sonder dak of ruite, maar met helder geverfde mure – die Hoërskool Nkululeko hier in Kwanobuhle spog nou met 'n geïmproviseerde gimnasium.

As deel van hul kurrikulum het vindingryke derdejaarsstudente in menslike bewegingskunde aan die Nelson Mandela Metropolitaanse Universiteit (NMMU) die projek Paspoort na gesondheid na dié skool gebring.

Dr. Cheryl Walker, hul lektor, het gesê die departement menslike bewegingskunde wil met hierdie projek fisieke aktiwiteite en skole sport by benadeelde skole bevorder.

"Hier by die Hoërskool Nkululeko is die geboue erg gevangdiseer, en die vensters en dakke is stukkend.

"Met 'n skenking van R10 000 en 800 liter verf het die studente 'n bietjie kleur en pret in 'n ou pakkamer ingebring."

Die studente se opknappingspoging het die skoolgemeenskap van voor af geïnspireer. 'n Tuinboukomitee is ook gestig, die terrein is netjies gemaak en twintig bome, wat die studente ook gekry het, is in 'n laning geplant, het Walker vertel.

Die voorsitter van die projekkomitee, Obie Ebrahim, het gesê hulle het besluit om nie die ruite en dak te vervang nie, omdat die lokaal dan maklik weer as 'n gewone klaskamer gebruik kon word.

"Die opeluggevoel maak dit nog meer pret. En die gimtoe-

rusting, alles geïmproviseer uit ou banke, word nie beskou as die moeite werd om weg te dra nie," het Ebrahim bygevoeg.

Die skool is aanvanklik gestig as 'n afrondingskool vir matriekleëders wat hul finale skooljaar moet herhaal, maar dit is later omgeskakel na 'n gewone hoërskool.

Met die geborgde verf is 'n muurverf-marathon aangebied en die studente, leëders, onderwyser, asook lede van die gemeenskap het almal ingespring en deelgeneem om die koms van die lente te vier.

Die "opelug-fiksheidsentrum" met sy kleurryke opvoedkundige muurskilderye sal veral in die nuwe jaar gebruik word om die skool se sportlui topfiks te kry, het Ebrahim verduidelik.

Die gebreke van die skool is herwin en met 'n bietjie sweiswerk en baie inisiatief in gimnasiumtoerusting omskep. Terselfdertyd kon die studente hul kennis oor gesondheid en fiksheid met die leëders deel.

'n Nuwe musieksentrum maak aërobiese oefenklasse moontlik vir dié wat nie sokker- of netbalspelers is nie.

Mzuvukile Prince (21), 'n gr.11-leerder wat lid van die skool se eerste sokkerspan is, het gesê drifig vertel dat hulle volgende jaar met die louere wil wegstaap noudat hulle 'n lekker oefenplek het.

Khaya Bool, onderwyser en sportkoördineerder van die skool, het beaam die leëders se belangstelling in fiksheid het nou "nuwe spiere" ontwikkel.

## Ubuntu in action

ELEVEN Human Movement Science third-year students have made a difference in the life of learners at Nkululeko High School in Kwanobuhle, Uitenhage, who now have a "gym with a difference".

Learners have regular gym sessions, aerobics and are taught the correct exercise techniques.

This project forms part of the Human Movement Science Department's PasSport to Health Project, promoting physical activity and school sport at disadvantaged schools.

Nkululeko is one of three selected schools for 2012. Students rose to the challenge to make a difference to the dilapidated buildings, broken windows and evidence of vandalism.

They raised R10 000 in cash and kind for the school over six months with 800 litres of paint donated by a sponsor.

A Spring Day Paint-a-wallathon was organised with learners, teachers and the community pitching in. The students also had 20 trees donated and planted, transforming the school grounds.

The outdoor fitness centre was created in an abandoned building using recycled desks welded into gym equipment.

Colourful and inspiring murals were painted on the walls and various sports and gym equipment was purchased. Learners are also educated about health and fitness.

The students will continue next year with the work and hope that the fitness club will grow and be used extensively by teachers and learners.

**BEFORE AND AFTER** – Third-year Human Movement Science students converted this derelict building at Nkululeko High School in Kwanobuhle, Uitenhage, into an outdoor fitness centre.





# Bitter / sweet ending .....





# Our gym is now the new staff room







## PasSPORT TO HEALTH



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Process

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### RESEARCH:

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After

HMS students together with teachers and parents create physical activity-friendly environments... bringing much joy