PRIORITY AREA · ARTIFICIAL INTELLIGENCE, ASSESSMENT & ACADEMIC INTEGRITY

Bridging Disciplinary Silos

Generative AI, Multidisciplinary Collaboration and Authentic Assessment in Health Sciences Education

Dr Shamanie Govender
Lecturer, Department of Biomedical and Clinical Technology, Faculty of Health Sciences, DUT

Ms Melishnee Ruthanam
Lecturer, Department of Community Health Studies, Faculty of Health Sciences, DUT

14 October 2026- Durban University of Technology

THE PROBLEM

Professional silos meet an AI-mediated classroom

1

Graduate readiness

Employers expect graduates to collaborate confidently across disciplinary boundaries — not just master a single field.

2

Professional silos

Environmental Health and Clinical Technology practitioners often work in parallel, rarely trained to communicate across their fields.

3

Untested collaboration

Assessment practices rarely evaluate authentic, cross-disciplinary teamwork — or how it is actually produced.

4

AI is already here

Generative AI now mediates how students research, communicate and write — raising integrity questions assessment design has not caught up with.

What we set out to learn

AIM

To explore the experiences of third-year Environmental Health and Clinical Technology students in a multidisciplinary collaborative project — and the role generative AI plays in shaping their learning and the integrity of their assessed work.

1. What are EH and CT students' experiences of a multidisciplinary collaborative project?
2. How does the project develop students' critical thinking and innovation?
3. What challenges arise when students work across disciplines?
4. How do students perceive generative AI's role in collaboration — and its risks for assessment integrity?

METHODOLOGY

A qualitative, exploratory design

Design

Qualitative exploratory study at a South African university of technology

Sampling

Purposive sampling of third-year students in both programmes

Data collection

Focus groups (10–15 students) held on Microsoft Teams after the project

Analysis

Creswell's six-step thematic analysis of focus group transcripts

38

Environmental Health third-year students

14

Clinical Technology third-year students

10-WEEK COLLABORATIVE PROJECT

From joint introduction and group formation through structured group work and progress check-ins, to a final assignment and debrief focus group.

THE COLLABORATIVE ASSESSMENT

From introduction to debrief

Generative AI is not a separate add-on — it is embedded across weeks of real group work, which is exactly why its assessment implications matter.

1 — Wk 1

Introduction

Groups formed; disciplines introduced; communication norms agreed

2 — Wk 2–3

Group work

EH and CT students collaborate on the shared assignment

3 — Wk 4

Progress check-in

Lecturers review drafts and address emerging challenges

4 — Wk 5–8

Group work

Continued collaboration, incl. generative AI as a communication aid

5 — Wk 9

Assignment due

Final multidisciplinary submission

6 — Wk 10

Debrief focus group

Students reflect on experience, collaboration and AI use

AI as a bridge between disciplines

OPPORTUNITY

- Helps students translate unfamiliar technical terminology between EH and CT
- Supports negotiation of shared language and priorities across fields
- May scaffold higher-order thinking — synthesis, not just recall
- Mirrors how AI already features in real multidisciplinary workplaces

RISK

- Blurs whose work is being assessed — the student's or the model's
- Complicates individual accountability inside group submissions
- Makes authorship and originality harder to verify
- Current assessment design has no clear answer for this yet

PRIORITY FOCUS

Where assessment integrity is tested

1

Individual accountability

How do we credit and grade individual contribution inside a group task that used shared AI assistance?

2

Authentic vs. AI-generated

Where is the line between legitimate scaffolding and AI doing the disciplinary translation for the student?

3

Verifiability

Can lecturers meaningfully verify originality and effort in a collaborative, AI-mediated submission?

FINDINGS

Themes

1

Pedagogical benefit

Greater insight into own professions, broke discipline silos, critical thinking, highlighted interconnectedness of health professions

2

Improved graduate readiness

Development of soft skills – interdisciplinary communication, work-preparedness, professional skills,

3

AI as a health tool

Ethical and effective use of LLM platforms
Identified limitations of LLM
Encouraged creativity

4

Relevant graduates

Health professionals prepared for diverse communities and professionals
Suited for the needs of the Global South

Excerpts from the findings

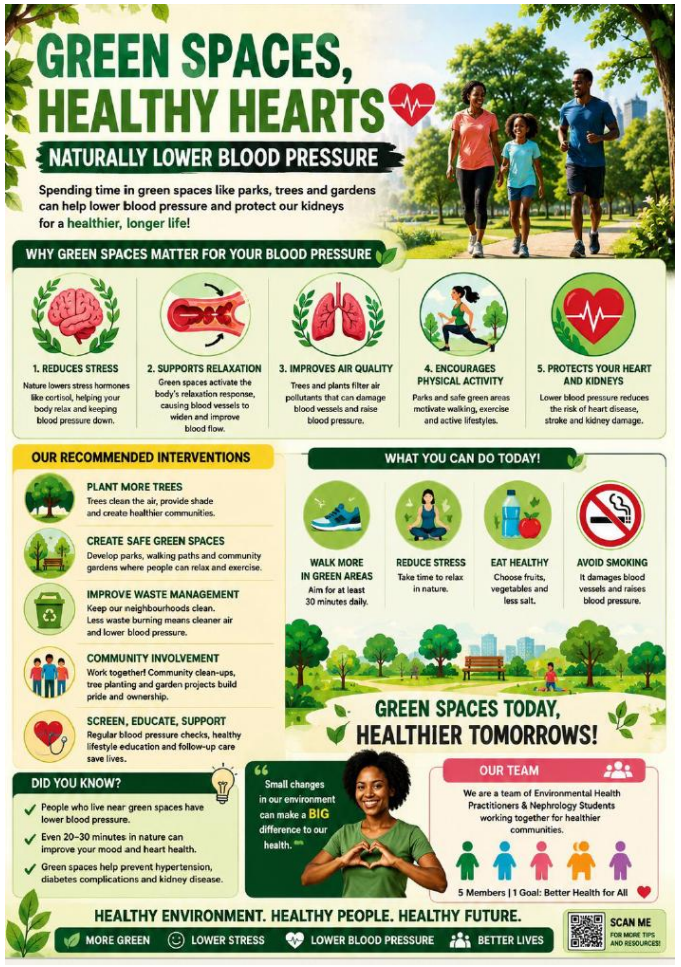
To know that chronic kidney disease can be avoided by just trying to solve and implement the simplest primary prevention strategies that we as EHP get to learn about (P2)

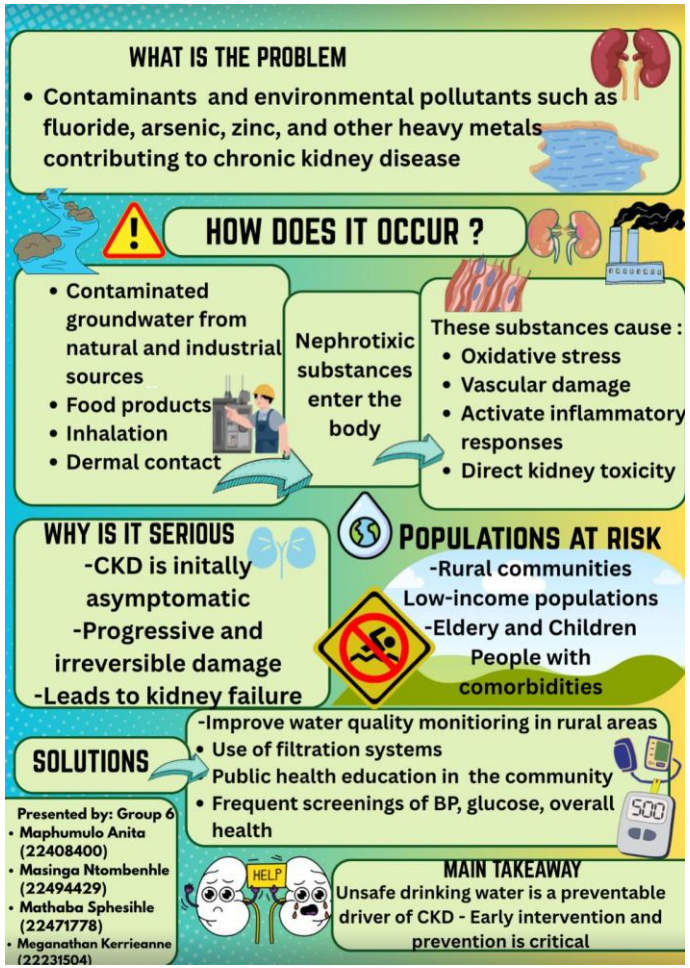
Very interesting experience because I also found out that I'm the only one of a different tribe. I was the only Zulu and the three of them were Xhosa. So it was really interesting how I was able to connect with them and also work with them and understand their language…I feel like it will also help me in the workspace, working with people of different tribes (P3)

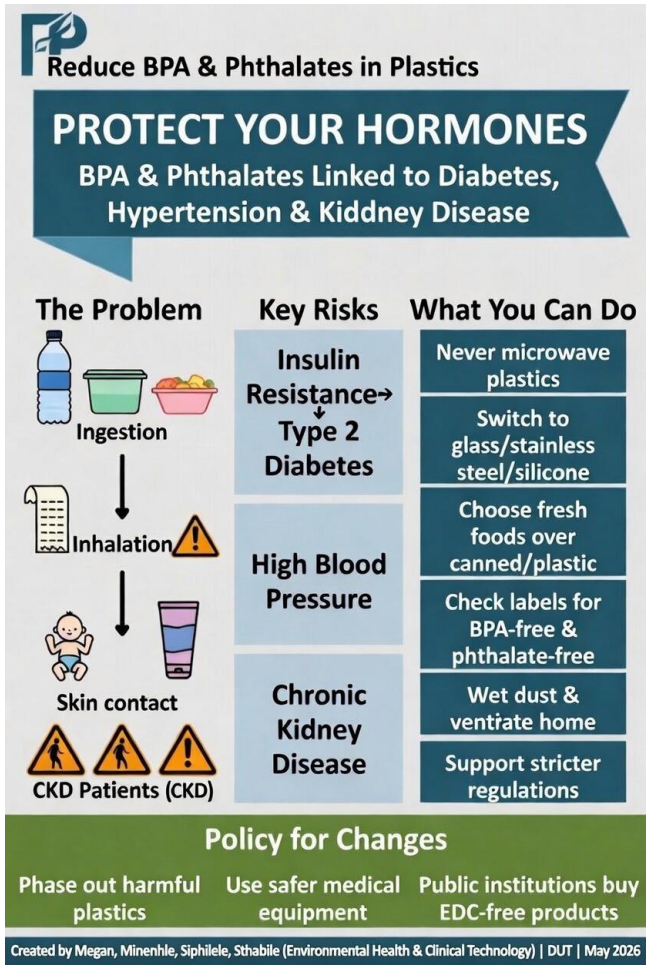
Also highlighted that AI cannot be 100%. So it actually made me aware of mistakes that AI could make …That was very interesting for me to see and actually see what comes out when we do certain things or change certain things in our prompts (P1)

the two fields of study in question, because environmental science and Nephrology, how unexpected, but somehow it worked (P5)

Exemplars of AI generated education tools







Challenges

1. **Remote communication and collaboration**
2. **Group ratios**
3. **Preserves legitimate use**
4. **Cross-disciplinary model**

"Artificial Intelligence, Assessment and Academic Integrity"

CONTRIBUTION & RELEVANCE

Recommendations

1

Fills a research gap

Very limited African-context evidence on multidisciplinary assessment intersecting with generative AI.

2

Practical guidance

Findings can inform assessment design that is authentic, verifiable and resilient to inappropriate AI use.

3

Preserves legitimate use

Guidance that still permits genuine AI-assisted collaboration, rather than banning it outright.

4

Cross-disciplinary model

A replicable approach for other Health Science programmes and universities of technology.

PRIORITY AREA ALIGNMENT

"Artificial Intelligence, Assessment and Academic Integrity"

This study investigates how generative AI shapes authentic, verifiable assessment practice within collaborative, multidisciplinary undergraduate learning — directly answering the Indaba's call.

Thank you

Questions and discussion welcome.

Dr Shamanie Govender
ShamanieG@dut.ac.za

Ms Melishnee Ruthanam
MelishneeR@dut.ac.za