

TESTING THE DEVELOPMENT OF GEO-SPATIAL FIELD PRACTICE IN THE FORMULATION OF ENVIRONMENTAL CONCEPTS

H. Beckedahl², M.Fruehauf¹, M.Lindner¹, M.Zierdt¹, G.Schmidt¹, A-K.Lindau¹, A.Finger¹, M.Marz¹,
B.Heynoldt¹, C.Greenland², F.Pwiti², S.Nkomo², M.Mlipha³, S.Seyama³, P.Dlamini³, N.Magagula³ &
S.Malaza³

¹ Martin Luther University, Halle, Germany

² University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa

³ University of Swaziland, Kwaluseni Campus, Swaziland

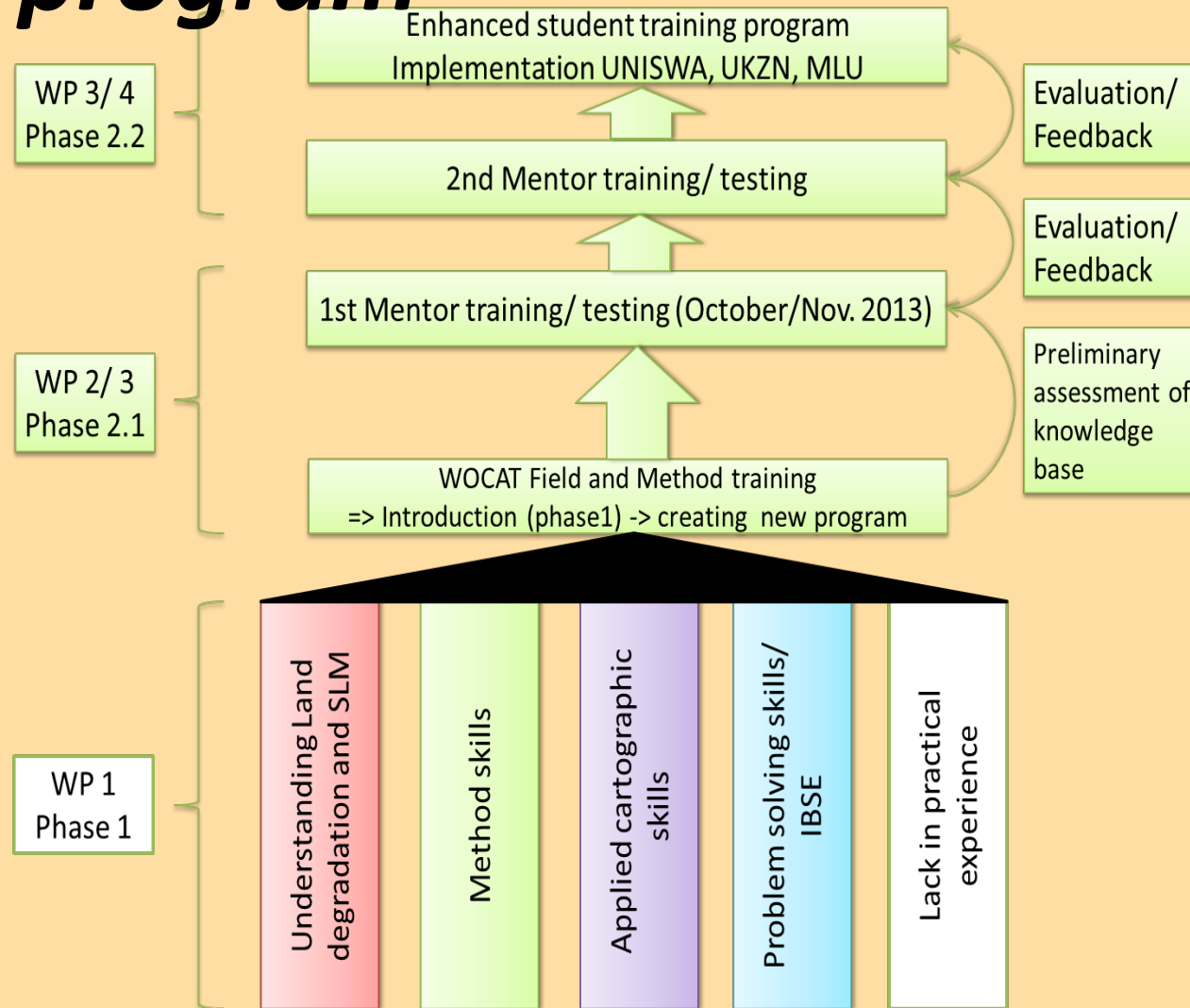


Martin Luther University

DAAD

Deutscher Akademischer Austausch Dienst
German Academic Exchange Service

Theme and framework of program



Theme and framework of program

- In the first phase (WP 1) an analysis of the current curriculum of geography modules at all 3 institutions was undertaken. This was done in a meeting at UKZN where it was established by lecturers and tutors that students in the first, second and third year at university level were facing difficulties in various physical geography components.
- In the second phase (WP 2) a module for the geo-systematic spatial perception and representation of information was formulated. The general objectives of this phase are spatial geo-ecosystem oriented cause-and-effect analysis; understanding the processes between landscape elements; land use systems, and ecologic-system-processes.
- The application of GIS and implementation of (new) technologies is integral to this work.



Evaluation of material

- Evaluation of the results showing a comparison of the two southern African institutions was performed and focused on the clarity of the material produced and on instructional design.
- Evaluation was in the form of individual student reflection using a 5 point Likert-scale from a standardized course evaluation from the Martin Luther University, adapted for this project.

Evaluation context

- WP 2, is mainly focused on the practical component, facilitating understanding. A series of discussions between the lecturing staff and tutors from the respective institutions involved resulted in the practical component being carried out in two phases to facilitate testing, reported on here.
- It was also agreed that a participatory approach would be beneficial to the problem oriented practical component of the project where tutors facilitate method application and discussion, rather than taking the role of an ‘instructor’.

- A comparison of the results from the two institutions was performed and focused on the comprehension of the material produced and on the instructional design.
- Evaluation was in the form of individual student reflection with a 5 point Likert-scale using items of a standardized course evaluation from the Martin Luther University, adjusted to the project.

Preliminary Results of Evaluation

Figure 1: Self-evaluation scales for the category “Design and Structure”, N=22, 1=Strongly disagree,, 5=Strongly agree.

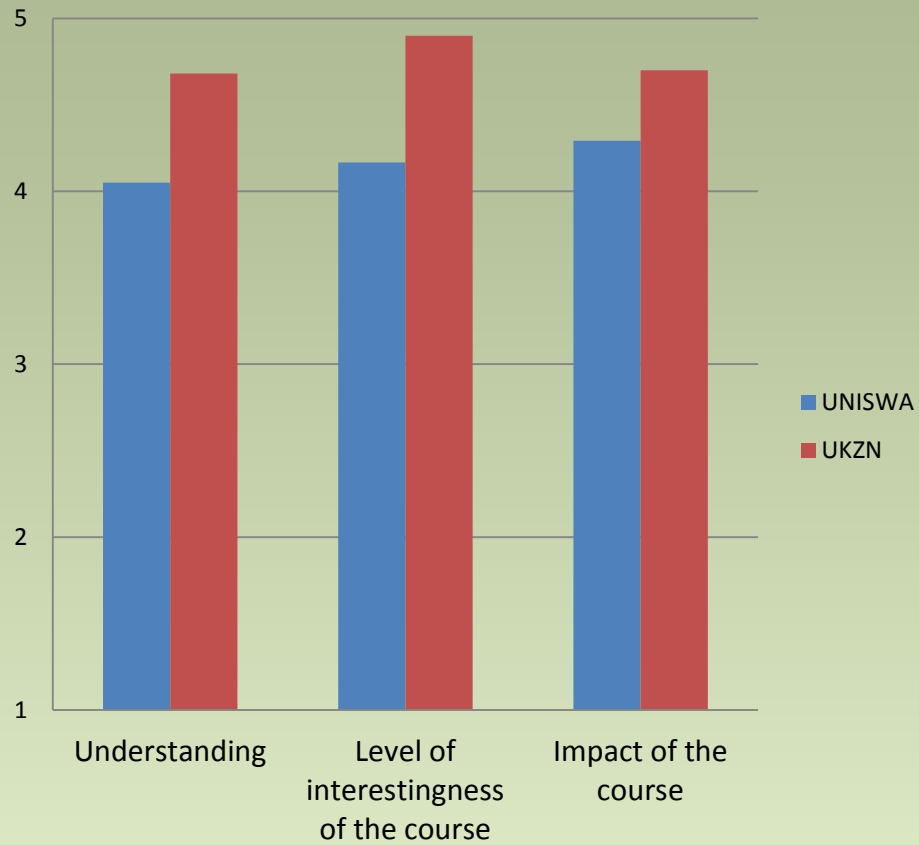


Figure 2: Self-evaluation scales for the category “Student effort and requirements”, N=22, 1=Strongly disagree, 5=strongly agree.

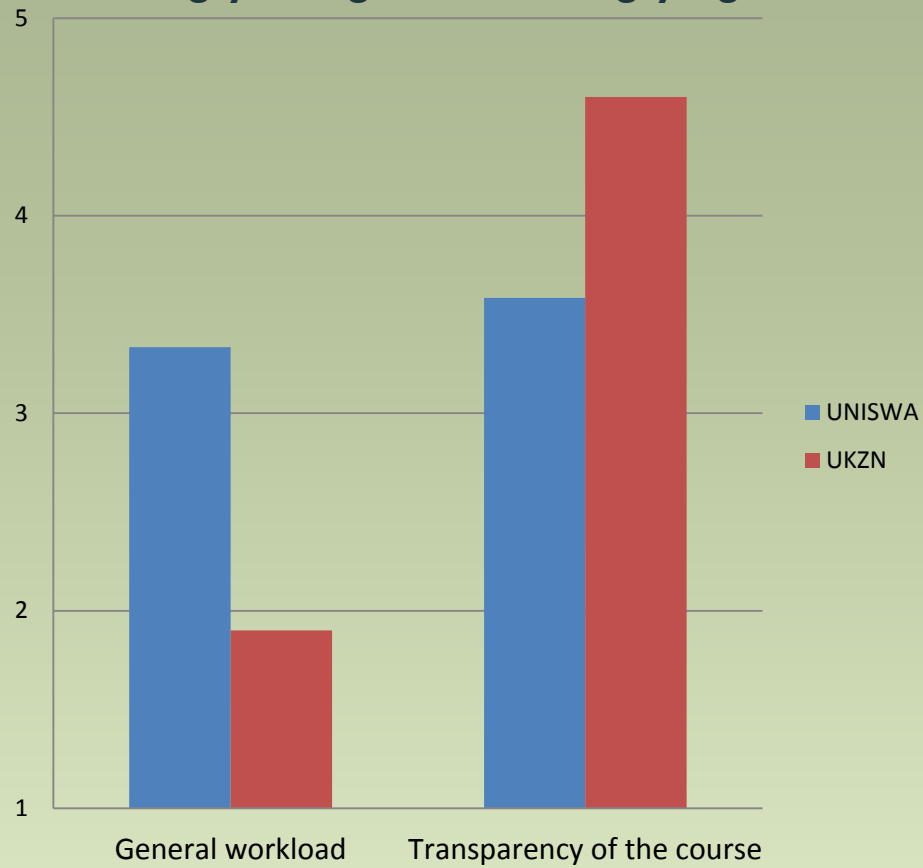


Figure 3: Self-evaluation scales for the category “Realization of the Course”, N=22, 1=strongly disagree, 5=strongly agree.

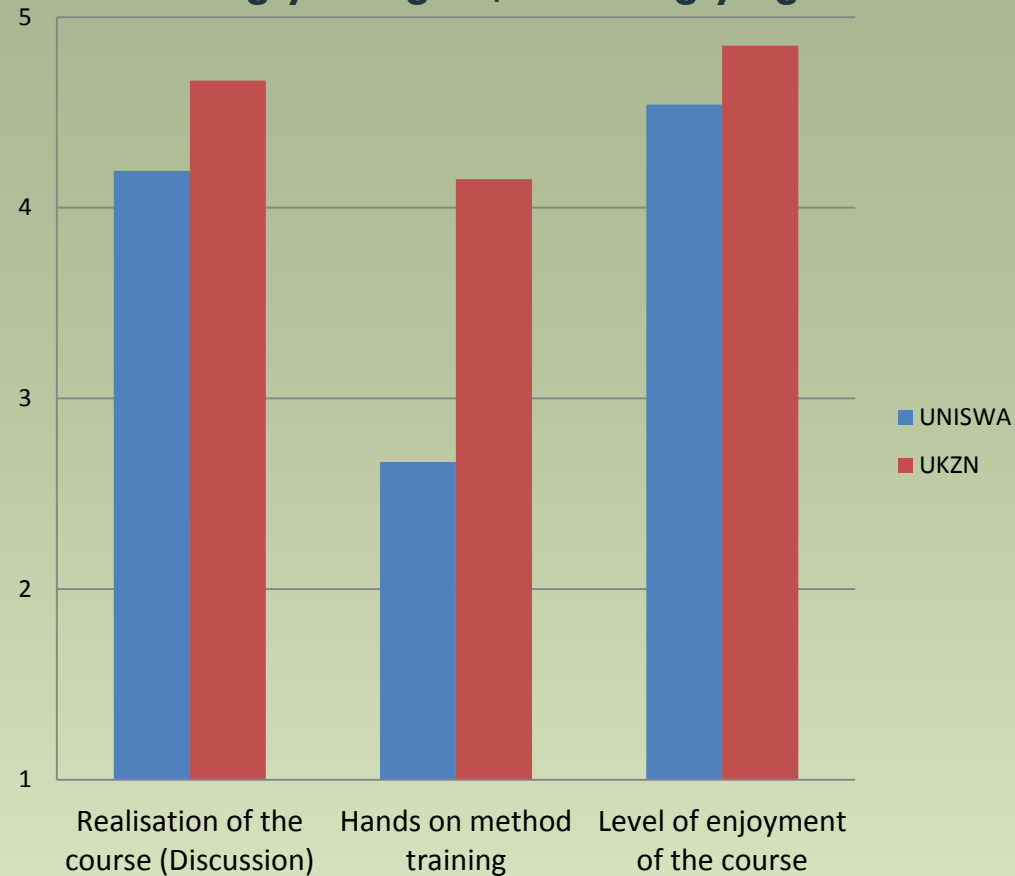


Figure 4: Self-evaluation scales for the category “Usability of the materials”, N=22, 1=strongly disagree, 5=strongly agree.



Summary and Future plans of the program:

- The next phase of the program, is to enhance training programs for tutors to be able to apply and assist with this module in the three institutions and hopefully to extend it to other institutions as well.
- This group is the first generation of tutors who have been trained on the program and it is hoped to train 15-20 second generation tutors.
- It is intended that the information will be captured in the form of workbooks. These should undergo regular revision and evaluation in order to enhance the program further.