Tittle: Zimbabwean Students' Conceptions of Selected Ecological Concepts

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Abstract

The study was aimed at identifying the conceptions held by ‘O’ Level students who were studying the Zimbabwe Integrated Science syllabus in Mutare urban high schools. The study was conducted with 409 students. The conceptions were established by administering a multiple-choice test on ecological concepts followed by face-to-face interviews with 27 respondents.

The study established that students held erroneous conceptions in varying degrees in the following aspects of ecology: food chains and webs, populations, inverted pyramid of numbers, nitrogen cycle, carbon cycle and energy flow in ecosystems. However, students had a clear understanding of the source of energy for plants and some food web dynamics.

The results of this study suggest that students are likely to hold erroneous views of the topic under study. It is suggested in this study that teachers should endeavour to identify students' misconceptions on a given topic, and then use them as a basis for instruction. Curriculum developers should design science curricula that build on students' conceptions, and to that effect the Zimbabwe Integrated Science syllabus needs revision so that students' misconceptions of certain ecological concepts can be addressed.