

Fieldtrip in a classroom: enhancing student diversity and inclusivity with the use of vPike

Faculty of AgriSciences | Department of Conservation Ecology and Entomology

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Learning activity:
Virtual fieldtrip

Learning technology:
vPike

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Context

Background overview

The department of Conservation Ecology and Entomology at Stellenbosch University offers a 4-year professional undergraduate degree. Students who elect to take third year Conservation Ecology join the department in the second year of their BSc studies. In 2014 the Department was home to 150 students, including undergraduate-, postgraduate students and postdoctoral fellows. A staff complement of 11 academics and several external experts contribute to the teaching and learning of the undergraduate teaching programmes.

Students are predominantly English and Afrikaans first language speakers, with approximately equal number of males and females represented in the undergraduate classes. Historically, classes have comprised between 95 – 100% white students. The case presented here addresses an alternative approach to the lack of student racial diversity in the classroom. The student population includes international students from such countries as the United States of America, Belgium, Germany, Canada and Peru. The presence of these international students, enhances student diversity.

Subject area

The third year Conservation Ecology module is entitled Introduction to Conservation Management. This module includes a range of topics pertinent to conservation science and practice, including environmental policy formulation, community based natural resources management, and, with reference to this case, environmental sociology.

Established practice

Modules are typically presented in 50-minute lectures offered three times per week and one 3-hour practical once a week. Lectures are conventionally classroom based, and practicals constitute outings, group work in class or other activities that promote practical application of theoretical aspects covered during lectures.

The challenge

The Department of Conservation Ecology and Entomology is committed to diversify its student profile. This commitment rests on several premises:

- Stellenbosch University brands itself as an inclusive intuition of academic

excellence, situated in a culturally diverse area of the Western Cape;

- social-ecological systems include a diversity of social actors, all of whom should be represented in the science and practice aimed at conserving precious resources;
- the University and the Faculty have set strategic goals to realise a more diverse student complement representative of the national population; and
- biodiversity conservation requires a diversity of ideas and ways of thinking to tackle the complex issues we face in a South African society.

Strategies have been devised and operationalized to address the lack of ethnic diversity in the Department. Results have been slow, but promising, with the largest intake of black students to date having been achieved in 2013 and 2014. While the department continue to invest in these longer term strategies, the lecturer of the third year, Conservation Ecology module aimed to make use of existing diversity amongst students in the third year class. The idea was to take a step back from the obvious racial diversity imbalance, and focus on other measures of diversity that could be used in the classroom to enhance teaching and learning.

During a departmental reflection session in November 2012, members of the teaching programmes constructed a list of graduate attributes that they felt the students should leave with by the time of their graduation. Based on the lecturer's university experience, she have always held that student diversity in the classroom enhances peer learning, and opens up channels of thinking and dialogue that may otherwise be missed. With a class of predominantly white students, it was obvious that racial diversity was limited. Faced with this reality, and with the acceptance that transformation in that visible sense might be slow, she applied her mind to other forms of diversity. The lecturer started to identify how students are different from each other, and realised that this cohort of white students is of course not one homogenous group of people.

In her deliberate search for alternative measures of diversity, the lecturer realised that her students have different takes on their natural environment based on, amongst other things, where they grew up. It was clear from a first assignment – an expository essay on environmental ethics – that students felt strongly about the natural environment. For many of them



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the choice to embark on this particular career path seemed to be inspired by their value of nature and biodiversity. Therefore, the lecturer wanted them to share the stories of their own constructs of “the environment” as an introduction to one of the modules in the Introduction to Conservation Management course.

Possible advantages associated with the integration of technology

The lecturer looked up where students were from on the class list, and selected students who were diverse from the majority in the class, either by virtue of their geographic location, ethnicity, religious or cultural background (rural or overseas, etc.). With the student’s permission, the lecturer used vPike to “visit” the street of the student’s community, suburb, region, etc. vPike is an online geographic mapping and navigation tool that makes use of street views.

Learning activity

With the use of vPike, the lecturer is able to take the students on a “fieldtrip” around the world or around the country to visit each other’s areas of origin, right up to their street. The student is asked to give a brief intro on their community, environment and their local resources. These terms are then unpacked as the introduction to the module where it is examined how these concepts mean different things to different people. The series of lectures are shaped around the responses in the class, and according to the contents of the yearbook and pre-selected readings.

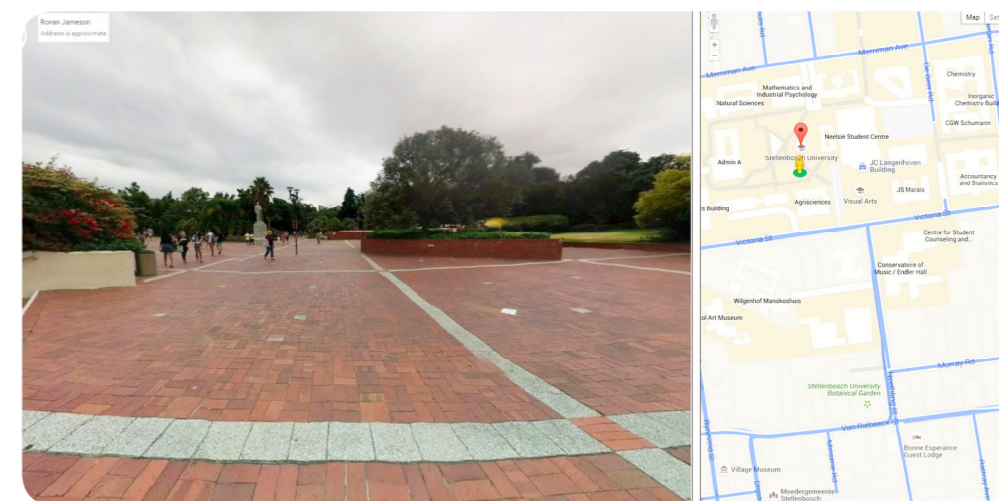
The advantage of using vPike as education technology is that the students are able to engage with personal stories of each other’s experiences of their “environments”. This can be done in 50 minutes, with different people volunteering information and stories. They are able to build a mosaic of “the environment” and it creates the impetus to critically examine social constructs of social and ecological components of social-ecological systems.

Learning environment

The activity took place in a conventional lecture theatre. Two project screens with clear resolution were used, and the internet connection was fast enough to facilitate seamless “travel” between sites.

vPike (www.vpike.com) is used as a tool for learning. vPike provides Google

Street View, area photos, local traffic conditions, a map measurement tool and driving directions. It allows the learners to engage in a completely new learning environment.



Student experience

At the end of the class students were asked how they liked this novel introduction to the module. They responded positively. They raised the following points:

- “It’s a good way to see where other students grew up.”
- “I enjoyed having to say something about my area.”
- “It made me miss home!”

General

Opportunities

The following worked well during the learning experience:

- The online platforms allowed students to “visit” each other’s hometowns and ask questions about what they could see visually of the “environment”: e.g. a farm, a suburb, etc., a nature reserve, an informal settlement or industrial area.
- Students were able to ask questions of the person whose area they were visiting about parts of the “environment” that they could not see: e.g. social institutions, labour and sources of primary production, community structures.
- Students’ peripheral to the norm in the class had an opportunity to



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share their perspectives and show the class the alternative or similar perspectives they feel they represent in the class.

- It was also an opportunity to get to know each other, to reflect on the diversity amongst us, and how that diversity shapes how we see the world as citizens, as conservation practitioners and as graduates.

Challenges and advice

It is necessary to ask prior consent of students whose streets are visited, as students may feel targeted or less inclined to share their places of origin in this sort of setting. Only students who volunteered the information were asked to share their environment.

It is important to facilitate the process so that students understand the purpose and the follow-up to the exercise as a learning activity relevant to other subject matter. The following three questions act as guide for any student who volunteers for the class to visit their street:

“Tell us about your environment.”

“What can we ask about the environment that we cannot see?”

“What is one of the most pressing environmental issues in the area where you grew up?”

Concluding thoughts

Deliberately seeking out diversity amongst what might seem like a homogenous group of students is a refreshing experience. The new perspective has led the lecturer to consider other ways of using existing diversity in the classroom to enhance graduate attributes amongst our students. Diversity in the classroom can be promoted in several complementary ways that has to lead the student to reflections on policy formation, and participation in community conservation projects and research. Online technologies can transport the students to different places in a matter of seconds, and at no great cost. It does not replace a fieldtrip, but for the modest purposes explained here, it may be a worthwhile consideration for exploring new places, and new ways of teaching and learning that excite, inspire, and promote student inclusiveness in a diverse university setting.

