

# The Flying Classroom - a lab in a suitcase

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“The Flying Classroom – a lab in a suitcase” is a novel international, interdisciplinary teaching and learning concept. It offers a great variety of experiments and activities from which the hosting institution can choose. Examples include microbiology, biochemistry, mycology, botany, children’s excursions, language and culture courses, theater, and cooking. Necessary equipment will be brought in a suitcase and/or purchased locally. All experiments can be adapted to different study levels (Bachelor or Master students as well as school children or interested citizens) and equipment (simple kitchen to high-tech lab). Course languages could be English, German, Spanish, French, or bilingual. The duration of the course may be between one week and two months. Ideally, the course is conducted together with a staff member from the host institution and a booklet is prepared to facilitate future courses with local staff (sustainability). Funding might be through national or international grants. The first run of the project took place at Universidad Veracruzana, Xalapa, Mexico and was funded by Erasmus Mundus “Mayanet” (2017) with a focus on crop protection and botany. The second run (October 2018) was a collaboration with BUAN (Botswana University of Agriculture and Natural Resources, Gaborone, Botswana). It aims at installing the course “Basic Laboratory Techniques”, given at the Department of Crop Sciences, Georg-August-Universität Göttingen, in the BSc curriculum at BUAN.

## Field excursions



Taking soil samples at 3000 m altitude in a potato growing area in Veracruz state, Mexico

## Laboratory experiments



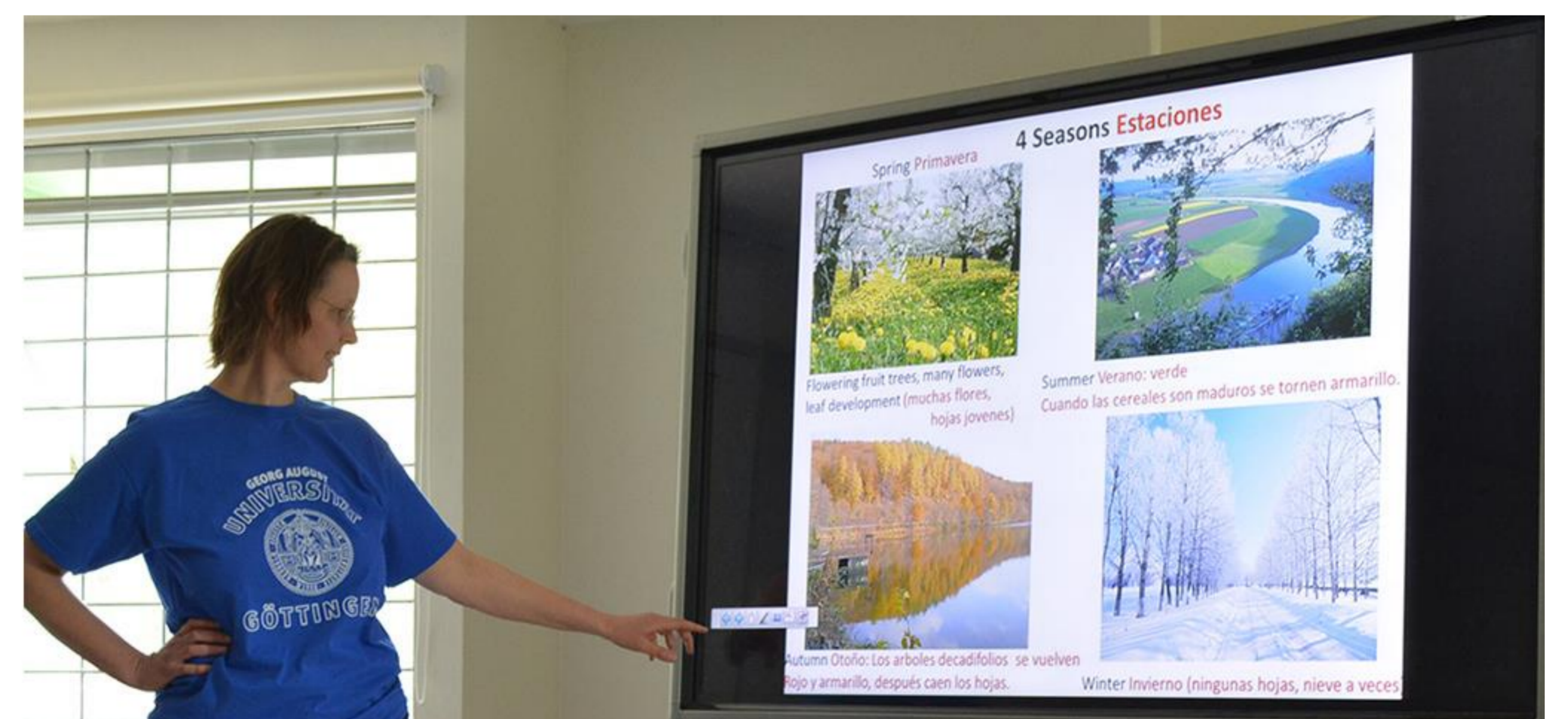
Preparing media for soil micrororganisms:

PDA from Mexican potatoes (above) for comparison with ready made PDA, and V8 vegetable juice medium (right).

In addition to microbiological techniques, DNA-extraction and PCR were performed. Students also wrote lab reports and discussed sustainable cropping methods



## Intercultural communication



Presentation “Germany and the Germans”: seasons

The presentation was also given at a school in a remote village.

## Conclusions:

The Flying Classroom-project allows institutions to share their teaching experience and to create new learning formats in a simple way. Scientific and cultural/social aspects can be easily combined. Outreach activities to the broader public ensure that the process of internationalisation reaches beyond the academic layers of society. Crop protection is an ideal starting point for interdisciplinary courses worldwide.

## Acknowledgments:

The authors are grateful for an Erasmus Mundus “Mayanet” scholarship and a scholarship from Göttingen International. Sources: [www.uv.mx/mceb/general/se-realizo-el-tercer-seminario-cientifico-del-periodo-201751/](http://www.uv.mx/mceb/general/se-realizo-el-tercer-seminario-cientifico-del-periodo-201751/); [www.uv.mx/inbioteca/general/finalizo-exitosamente-el-curso-soil-microbiology-in-subtropical-soils/](http://www.uv.mx/inbioteca/general/finalizo-exitosamente-el-curso-soil-microbiology-in-subtropical-soils/); [de.wikipedia.org/wiki/Claudia\\_Schiffer](https://de.wikipedia.org/wiki/Claudia_Schiffer); [de.wikipedia.org/wiki/Angela\\_Merkel](https://de.wikipedia.org/wiki/Angela_Merkel); [de.wikipedia.org/wiki/Heidi\\_Klum](https://de.wikipedia.org/wiki/Heidi_Klum); [aaublog67.wordpress.com/2015/09/08/university-in-focus-botswana-college-of-agriculture/](http://aaublog67.wordpress.com/2015/09/08/university-in-focus-botswana-college-of-agriculture/) own photos and photos by S. Demirkale and M. M. Martin



Cómo se ven los alemanes?

## “How do Germans look like?” Part 1



Claudia Schiffer, Heidi Klum, models, Angela Merkel, German Chancellor (Wikipedia) Sarah Demirkale, technician apprentice

Huitlacoche (corn smut): best of Mexican cooking