

# Agriculture and Languages Other than English

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## Abstract

A positive image of the study of agriculture and languages can be fostered through integrating agricultural science, research, and technology into primary and secondary school language classes. In this study, conducted in rural Victoria a practical approach to this integration is provided in order to assist teachers and curriculum writers. Students will study agricultural science and technology including farm safety topics in a bilingual setting. Emphasis is placed on the importance of agricultural science and the learning of languages. The curriculum is based on Victorian Educational Learning Standards (VELS), languages Pathway 1 and/or 2, level 3-4-5 in a multi-level classroom. This is expected that this approach to learning will connect well with the future National Curriculum Framework and CD based format is presented. By simplifying the format it is possible to maintain the original style of the printed proceedings for output in PDF format while allowing easy incorporation into modern web-based format.

## Key Words

Communication, Farm Safety, Integrated Studies, Investigation, Research, Science

## Introduction

From Gulliver's Travels by Jonathan Swift, 1726;

... 'and he gave it of his opinion, that whoever could make two ears of corn or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country than the whole race of politicians put together'.

In the farming environment of a remote rural school in North-West Victoria, agricultural topics always create great interest among the students. Agriculture is still the main industry, having been introduced to the region at a time when many German immigrants populated the area. In the following short sections, three topics of agricultural education are given as examples.

### *Agricultural technology*

Multilingual technical brochures and agricultural spare parts catalogues are easily obtainable for classroom use. Students read the German text and spare part listings and then use skimming and scanning skills and cognates to understand the main body and some details of texts. Skimming and scanning is a process of identifying words already known or easily guessed from pictures or existing technical knowledge. Cognates are words which are similar, and in the case of English and German languages, often identical. For example, tractor, machine and diesel in English are Traktor, Maschine, and Diesel in German. From the words they pick up, the students then create the machinery shed of a working farm. They can name the machines in German and English, the latter promoting English literacy skills. Secondary students may, as an example, create a spare parts order for a vintage Bulldog brand tractor. Many farmers in the region had a Bulldog as their first tractor and old catalogues and manuals are still available in German. Farm safety topics can be introduced using multiple choice quizzes and farm safety manuals provided by the state Departments of Agriculture. Questions are given in English and short answers provided in German. The vocabulary is largely student-created through brain storming but could also be generated by the teacher (Mock 2001).

### *Agricultural Botany*

Students are given a seed unknown to them to plant in a clear plastic soil-sampling tube. The tube, or substitute plastic bottle, is open on both ends. The tubes are then inserted one third of the way into a plastic box full of local sand or soil and surrounded by a black paper sleeve. The sleeve can be removed for inspection. The seed is placed in the top of the tube, lightly covered with soil and watered regularly. For legume seeds a dose of inoculum may be used. The students then wait and see the plant grow and then try to identify it using botanical methods or their own knowledge (Mock 2001). The roots can often be seen quite soon after planting when the students remove the black sleeve for inspection.

### *Water use and Production*

Students research the usage and experience of water in the environment. Students investigate the various forms of water and find out what can be produced with water, sunlight and soil (Mock 2007). Students investigate the role of water in the production of plant or animal based food, discover non- food items created from plants. Students also study a simplified model of photosynthesis using a tree and measuring the level of sugars (carbohydrates) and oxygen produced which could then sustain a family and, on an extrapolated basis, sustain the world (Mock 2007). This education can be provided using German vocabulary for all topics and giving an English explanation where necessary. As in most cases, student-generated vocabulary is preferred over teacher-generated vocabulary. Students are encouraged to state the word they associate with the particular topic in English and the teacher writes it on the board or computer. For family relations topics, the teacher may use prescribed topics from the relevant framework of a language curriculum, including introductions of family and friends and making simple investigative conversations.

### *Farm safety*

A range of farm safety brochures and fire fighting brochures are available in any State. These are used as guides on safety but the opposites of all instructions are used to create an unsafe farm. Primary schools often have materials used in this creation, including cardboard boxes, balsa wood, glue and stickers. From these materials and the brochures, students build three dimensional farms. The farms may include a sheep paddock where the fences are in disrepair, the machinery shed may have a tractor without roll-over protection, and the roof of the house may have gutters full of leaf litter. As before, all words and phrases used can be collected in English, written down in the target languages and in English if preferred, and then the use of verbs can be introduced. An example may stem from the sentence 'I have a red tractor', to which is added 'The tractor is old', followed by 'The old red tractor leaks Diesel'. In this way the students are taught the present tense of verbs, namely the most important ones of 'to have' and 'to be', as well as the way of conjugating a regular German verb. A farm safety quiz, created by older students for younger classes can be used as an assessment task for both classes.

### **References**

- Mock, Luise (2001), Promotion and teaching of agricultural science and languages in schools or any opportunity to foster knowledge about the role of agriculture and to promote the learning of languages should be taken! Australian Agronomy Conference, Hobart, Tasmania, 29 February – 2 February 2001
- Mock, Luise (2007), Wasser ist zum waschen da, LOTE Conference Bendigo, 27 February 2007

### **Resources**

- Milch kommt aus der Tüte, oder? Ein Buch über Dinge, die wir essen, von Uwe Klindworth, Kinderbuchverlag Luzern ISBN 3-276-00173-X
- Australian German Teachers' Victoria: [www.agtv.edu.au](http://www.agtv.edu.au)
- Centrale Marketing Association: CMA Deutschland: [www.cma.de](http://www.cma.de)
- [Redaktion@Lehrerzeitung.de](mailto:Redaktion@Lehrerzeitung.de)
- [Landlearn.Program@nre.vic.gov.au](mailto:Landlearn.Program@nre.vic.gov.au), recently abandoned by DPI, Victoria.
- <http://www.biodiesel.de/pkw.ph>
- Australian Dairy Industry: [www.dairy.com.au/kids/index.html](http://www.dairy.com.au/kids/index.html)
- The Bean files: [www.clima.uwa.edu.au/beanfiles](http://www.clima.uwa.edu.au/beanfiles)
- Johnny Tractor:  
<http://www.johndeere.com/deerecom/-Germany/Unterhaltung/comic.ht>  
<http://www.johndeere.com/deerecom?-kids/Johnny+Tractor+Storybook/default.ht>
- The author has created many worksheets available from her directly or by using the AGTV website, [www.agtv.vic.edu.au](http://www.agtv.vic.edu.au), where some conference papers given at language conferences and workshops are published.