

Ben Bachmair

Institute of Education University of London

A biology and chemistry workshop for migrants in the botanical garden

It is a well known practice of situated learning to open the school doors and visit sites such as a botanical garden or a museum with their specific forms of learning. In the botanical garden a science specialist organized a workshop with the aim of getting the students acquainted with the specificities of such an environment. The students were aged between 14 and 16 and investigated the structure of the botanical garden among other things with the geo-positioning function of their smartphones. They looked for the relationship of running and stagnant water and plants etc. They also analyzed water looking for pollution with acid or other kinds of contamination. The group comprised newly arrived young migrants, who could cope with the German language quite well orally in everyday life, but not with the special language of a scientist. The main purpose of going outside the school was to become aware of different and new forms of teaching and learning and to experience other practices and communities of learning. This is an essential feature of situated learning (see Lave and Wenger, 1991 and Wenger, 1998). For learners with a migration background it is arguably very important to problematise experiences with learning in their new cultural context in order to become aware of their specificity in relation to potential explicit and implicit differences in German contexts of learning.

A botanical garden is not primarily an explicit site of, and context for learning. The students mostly enjoyed their visit of the site, followed the scientist around, took a lot of pictures and videos with their mobile phones and produced a kind of diary of their visit. This diary gave some sustainability to their investigation of the botanical garden in that it supported an awareness of the garden as a learning context at a simple level. This matched the character of a botanical garden as an area for wellness, beauty and leisure time. From everyday life the students knew how to use their mobile devices to produce a photo diary, although the photo diary ran under the heading of a portfolio. Back in the school and together with their teacher, the students worked on the diary and produced a proper report for which they used PowerPoint slides. In the school PowerPoint is well accepted and it works well as an interface for written language and images. This teacher-guided and language-centered processing of the experiences in the botanical garden has led to a higher level of awareness of the learning site *botanical garden*. The quality of the German language used on the PowerPoint slides is not perfect and not free from spelling mistakes but the slides are a successful record of reflection, which combines photos with written language. The slides formed the basis of a public presentation in school. During the process of creating the slides, the students reconsidered their excursion by selecting relevant photos and by verbalizing and reflecting on their experience of learning.



Figure 1: Photo diary of the excursion to the botanical garden. During this excursion on three half days the group of newly arrived migrant learners took photos and videos in the botanical garden as a site for learning, which opened and supplemented the learning context of the school.

The final and formal lecture by the scientist at the end of the three half days of the excursion represented a big disruption in the process of the investigation. The scientist presented his lecture in the lecture theater of the botanical garden. It was like a traditional university presentation of chemical experiments. The students were polite and pretended to understand what the scientist presented and explained but the presentation in German was too complex for them to follow and featured a highly specialized vocabulary. In view of that, the workshop facilitator suggested a video role-play: an imagined host of a TV talk show presents words with an emotional connotation. The group of students asked the scientist to repeat important parts of his lectures and they recorded essentials from this lecture. Afterwards they checked their short videos for emotionally important words. For example, they appreciated words with relevance to cooking even if they were unknown and complex. In her PowerPoint summary one girl wrote: "But I learned difficult words e.g. gentle words, unfriendly words, beautiful words, silly words" (Figure 3). The photo on the slide depicts the rehearsal for the imagined TV talk show. One girl recorded the talk show presentation of another girl. The students worked intensively and in a highly concentrated manner on the selection of the vocabulary for the talk show, they listened several times to the recording from the lecture, took written notes and rehearsed the presentation of the selected vocabulary several time. Because of the video recording the students worked collaboratively in order to achieve a good result. In categories of awareness, the students jumped out of the verbal stream, which they did not understand, and worked on the vocabulary. They worked not by memorizing, but by practicing within the well-known context of entertainment TV. They were successful because they changed the context by acting in front or behind the mobile phone's video camera. Their experience of media practices of entertainment TV supported their appropriation of an extremely specialized vocabulary by contextualizing it as a TV genre. The role play in the form of a TV talk show brought a media-related practice into the lecture theater, which supported the students to act as real learners, which transformed them from a polite but excluded passive audience into active participants in an open context. In the categories of the *Situated Learning*, the TV context opened the role of an *apprenticeship* in the "community of practice" of the German language. In the terminology of the theory of *Situated Learning* (Lave and Wenger, 1991, p. 29) it is "legitimated peripheral participation":

It concerns the process by which newcomers become part of a community of practice. A person's intention to learn is engaged and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills. (Lave and Wenger, 1991, p. 29)



Figure 2: Migrant students contextualize unknown and specialized science vocabulary by rehearsing for a pretend TV talk show. In the lecture theater of the botanical garden they use the video application of their mobile phone for the role game as a TV presenter.