RESEARCH AND INNOVATION IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

Wim Lambrechts / James Hindson (editors)
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Research and Innovation in Education for Sustainable Development.
Exploring collaborative networks, critical characteristics and evaluation practices.

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TRACING FLAX – AN ENABLING PROCESS THROUGH AN INTERGENERATIONAL DIALOG

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ABSTRACT
The project “Landscape and You-th – Tracing Flax” (2012-2015) focuses on the relationship between local knowledge, landscape and regional identity through the cultivation and manufacturing of the flax plant in the Lesachtal region of Austria. The aim of the project was to reflect on and preserve traditional structures, practices and knowledge of flax, with the goal of enhancing cultural sustainability to promote regional development. Students from the „Neue Mittelschule Lesachtal“ (lower secondary school) and the „HLW Hermagor“ (upper secondary school) were trained in methods of recording oral history and then they interviewed local elderly people about the traditional cultivation and manufacturing of flax and its significance in daily rural life. Together, young and older people cultivated flax and processed it into oil, yarn and insulation material. Several media products and performances, including an app and a documentary were produced to enhance sustainable tourism in the region and offer added value for all stakeholders. The project provided an excellent opportunity for intergenerational learning. The project evaluation showed that students became aware of the interrelationships between people and the landscape and the socio-economic changes taking place in their region. They helped restore local knowledge about the landscape with regard to flax. Furthermore, as a result of the project, students strongly identified with their region, they valued living in the Lesachtal and had concrete ideas about its sustainable development.

KEYWORDS
Cultural sustainability, intergenerational dialogue, local culture, research cooperation between university, school and community, traditional knowledge
INTRODUCTION: Tracing flax in Lesachtal

The ongoing project “Landscape and You-th. Tracing Flax”, is funded by the Austrian Federal Ministry of Science and Research, and started in autumn 2012 as a research collaboration between the Alpen-Adria-University in Klagenfurt and schools in one of the most peripheral Alpine valleys of the region, the Lesachtal. This valley, in the southwest of Carinthia, Austria, borders Italy along a west-east chain of mountains, the Carnian Alps. With a declining population of 1,400 and a basic agricultural economy including some tourism, it displays all the problems typical of peripheral mountain regions. Regional development strategies have been re-focused over the last decades towards an economy based on sustainable tourism focusing on ecological and cultural resources such as the cultural landscape of the valley.

The focus of this research is on the relationship between local knowledge, landscape, intergenerational dialogue and regional identity connected with the cultivation and manufacturing of flax in the Lesachtal (see Figure 1). Flax (Linum usitatissimum) is a food and fiber crop that was planted in Lesachtal until the 1960s to produce flaxseed oil as well as fibres for making linen. When cotton and synthetic fibres appeared on the market, the time-consuming cultivation of flax became less and less profitable.
As the example of the Lesachtal shows, cultural landscapes develop through the interaction of society and nature and involve cultural and economic factors as well as ecological processes. Although these are constantly changing at the same time they provide long lasting structures of continuity. Landscape structures keep their shape sometimes for centuries, even if some practices operating in them change over time. A landscape serves different functions and we can still trace patterns of the medieval colonization such as its field structures in the Lesachtal today - still there from the middle ages. Regional agriculture has changed from a diverse self-sustaining subsistence economy to the specialised cattle farming of today linked with other smaller scale economic activities, mostly tourist based. Up to the 1960s flax, together with various other farm products was an important part of the self-sufficiency in the Lesachtal and this project traces the development of flax production as part of the traditional local culture from this period. Very little of the traditional knowledge concerning the cultivation and processing of flax has been documented in a written form. Hence it was decided within the project to cooperate with the local lower secondary lower school in the Lesachtal and a secondary high school, the HLW Hermagor, to trace and document the still existing narratives and stories related to flax.

Figure 1. Research process
METHODS

A participatory approach
The project is structured around co-operative research, including the action research methods developed by Kurt Lewin and John Dewey (widely used in the field of education and pedagogy) (Rauch, 2005), intervention research (Bammé, 2005; Krainer and Lerchster, 2012) and the ethics of the research process. The project design was led by the assumption that co-operation in the research process must be based on mutual interest, shared influence in decisions concerning questions, methods and products of research. There must also be a shared responsibility for the outcomes of the project. Right from the start the research process was defined by a partnership of local and regional schools with the research teams. The research proposal was set up in a co-operation with teachers and the head teachers (one of the requirements for funding) and the first workshop was designed co-operatively. The research team was responsible for project management, but all the activities in the region, the workshops, the oral history interviews, cultivation and processing of flax, the documentary and the media work were done with local and regional partners. The local partners also supported the project with accommodation, transport facilities and most of all in communicating about the project in the region. Two local associations, the “Kulturverein” (Culture Association) and the “Kräuterverein” (Herbs Association) were very much involved in organising the historically based activities such as cultivating flax, “roasting” flax, spinning, weaving and pressing oil. They also played an important role in contacting elderly people, coordinating oral history interviews and inviting some of the interview partners to workshops in the school. This local network of partners was both a precondition for a successful research process and also an important tool for the social integration in the community especially of those who carried the responsibility for the sustainable impact of the project (Strohmeier and Sieber, 2013).

Enabling an intergenerational dialog through oral history interviews
Students aged between 12 and 13 years and 16 to 19, together with their teachers were instructed in how to undertake oral history interviews, both as a scientific method of empirical study and as a communication tool between the generations (see Figure 2). Students interviewed elderly inhabitants of the valley – those from 80 to more than 90 years old – about traditional methods of cultivation and manufacturing of flax and its significance in their daily rural life. Using this method of intergenerational communication, students and teachers accessed local narratives and traditional knowledge. In addition the process generated topics of common
interest and curiosity between the youngsters of the valley and elderly people of
the community. This form of intergenerational oral history brings together people
of different generations in a socially integrating way, creating a mutual interest and
emotional bonds. As opposed to passive learning, oral history is highly engaging and
hands-on. Not only are stories collected but also social bridges between generations
are created.

![Diagram](image)

*Figure 2. Enabling Process*

**Evaluating the project**
The project was evaluated using qualitative methods (interviews with 5 project par-
ticipants) and quantitative methods (questionnaires for involved pupils) (Rauch and
Dulle, 2013). The interview results were analyzed using content analysis (Mayring,
2002) and the questionnaire results were interpreted descriptively (Lamnek, 2005;
Friedrichs, 1990). The evaluation focused on the cooperation between the schools,
the region and the university.
RESULTS
“Blossoms” produced by the Flax-project

The oral history interviews not only served as a tool for communication and mutual learning, but also as an empirical basis for several research products, including a documentary of local narratives and local practices related to flax. The project also produced secondary products using various media to communicate research results to the participating schools, the local population and interested tourists visiting the Lesachtal. Media products included smartphone applications were developed through the initiative of young people who decided what was important to show tourists from their viewpoint. Other products included a documentary movie and an animated cartoon drawn by the school students.

In class, the students created a flax blog with photos and sound files all to communicate research results. One of the sound files and a video-clip was a “Flax-Rap”, a song written and performed by the students. The “Flax-Rap” was performed at the opening ceremony of the renovated and re-planted cloister-garden of the monastery of Maria Luggau. In the new cloister garden students planted and harvested flax in a bed at the very front of the garden. This small flax-field received a lot of attention especially during the flowering period, when a bright blue patch of landscape helped people to imagine how the landscape looked like at times of traditional flax cultivation. All these products had the aim of communicating research results as widely as possible and in the process emphasised that increased local communication about the traditions of flax cultivation and the traditional agricultural landscape required a working co-operation with local stake-holders.

This study illustrates the connections between local knowledge, landscape and regional identity. It also provided a scientific basis for thinking of “intergenerational working together” as a way in which the future of a cultural landscape in relation to sustainable cultural development and common welfare in a region can be developed. A method of learning that connects practical exploration of the past, with elderly and young people working together, and the transfer of learning to different media products is increasingly regarded as a positive way of developing local understanding and identity. Landscape is viewed more and more by local people as both a geographical space and as a cultural concept. School pupils can gain an appreciation of the importance of local knowledge and, during the first hand research, an increased landscape awareness.

We explored the interrelationships between aspects of “learning by doing” through
the cultivation and processing flax, oral history interviews and transforming the knowledge into modern media products. The results show that the children of different ages can identify with traditional local knowledge and the landscape if the actual physical landscape corresponds with their mental images of that landscape. We found that it is primarily elements of the natural and traditional cultural landscape that are able to trigger positive feelings such as identifying with a landscape and a sense of well-being. The project shows the positive emotional effect of a landscape. Landscape is not only a functional space for children, but also is an important carrier of local meaning. This opens up new approaches in promoting sustainable development.

**Evaluation results**
The cooperation between the schools, the region and the university was described as “mutually appreciative” and “enriching”. Added value for the schools was seen through an improvement of the school’s image as well as through cross-class and cross-school collaboration. Science learning benefitted from new insights in intervention research, the emphasis on experiential knowledge as well as modern forms of knowledge transfer. The people from the region listed five main areas of benefit from the project: the restoration and opening of the cloister garden in Maria Luggau; securing of the original flax seeds from Lesachtal; raising awareness through transfer and dissemination of traditional knowledge; development of the local community; and the stimulation of tourism.

The evaluation results show that students became more aware of the interrelations between people, landscape and the socio-economic changes taking place in their region. An indicator of this was that after the project 94% of the pupils understood that in the past, local people strongly depended on the landscape because they used it for the production of food and cloth. This recreation of past agricultural practices brought people together from different ages for the purpose not only of collecting stories but also for creating a bridge between generations opening up a new world for both parties. Many of the agricultural experiences of the older generation had never been written about, so the only way to learn about them was to find a primary source. In this way “agricultural re-enactment” is an excellent learning and teaching medium for people of all ages.

Pupils helped in restoring regional knowledge about the landscape and in preserving the language associated with flax. This was achieved through oral history interviews, where pupils interviewed elderly local people who passed on issues
to do with contemporary life as well as living in the past, through their personal biographies. Through this form of intergenerational learning pupils generated valuable and personally relevant knowledge regarding the use of the landscape, the processing of flax and life in the past. Moreover, they were also confronted with attitudes and values that sometimes contrasted with their own, such as frugality, the enjoyment of work and the appreciation of ordinary things like food and clothes. Furthermore, the pupils contributed to the communication of scientific research results through developing different media products, such as an app, project blog, radio broadcast, documentary film and cartoon, the “Flax-Rap” song and presentations at several events.

The questionnaire data collected from the 35 pupils who were actively involved in the project, show that the topic of flax and the project itself created an interest amongst students. They were particularly excited by the practical hands-on-activities related to flax from the cultivating and harvesting to the processing. Furthermore the historical and theoretical approach to the issue was appealing. Almost all pupils rated the project as a whole as “very good” or “good”. The main characteristics of the Lesachtal from the view point of the pupils are the villages, the cultural treasures such as the basilica of Maria Luggau and its cloister garden, the mills, the locations for processing flax as well as the beauty of untouched nature. However, when looking into the future the majority the pupils believe that the Lesachtal will develop through greater urbanisation, modernisation and a growth in the population. 27% of the pupils welcome this development, whereas a similar proportion of 27% indicated that they like their region as it is.

The evaluation showed that pupils identify strongly with and value their region. Figure 3 shows that pupils tended to have a slight tendency towards a strong space-related identity. Having said that it must be mentioned that in 2014 only 25 pupils (age 12-14) of the lower secondary school in Lesachtal were surveyed. Whereas in 2013 9 pupils (age 16-19) of the New Secondary School Hermagor (a town outside Lesachtal) were surveyed in addition, who do not come from Lesachtal. Furthermore, it must be remembered that these figures reflect the viewpoint of 12-18 year olds who have not lived anywhere else. Thus, the positive development towards a strong regional identity cannot be interpreted merely due to the project. The pupils probably feel deeply rooted to their region because this is the place where they were born, grew up and feel comfortable. Most pupils wish to find a job in the region in future although it is apparent that fulfilling this desire will be difficult bearing in mind the educational and job opportunities in the Lesachtal.
100% of pupils questioned in 2014 agreed with the statement: “I feel an inhabitant of Lesachtal”. All of these pupils come from Lesachtal. In 2013, only 69% agree to that statement. It is probable, that those 13%, who do not agree, or agree less (3%) with the statement, do not come from Lesachtal.

In 2014 80% of the pupils strongly agreed, and 20% agreed to the statement: “I still want to live here later on”. This is a significant increase compared to the 53% of strong acceptance of 2013.

Another significant increase can be seen in the acceptance of the statement: “I hope to find work in Lesachtal”. Whereas in 2013 only 31% of the pupils hope to find a job in Lesachtal, in 2014 72% support this statement strongly. However on both occasions pupils mention that there are no possibilities for further education and job opportunities in Lesachtal.

Figure 3. Space-related identity of pupils
DISCUSSION AND CONCLUSION

There are fundamental differences of opinion in social and cultural sciences about the measurement of project success and impact. Some consider that research can explain specific structures and processes of change, and might communicate the results. However, it is left to others to translate the research outcomes into specific actions and practices. In the case of the Tracing Flax project, which focused on regional development, a different perspective on the evaluation of research results and their impact in and on society was chosen. The project design did not separate the research process from the practical application of research outcomes in the region.

The explanation of structures and change processes lies in the hands of both the researchers and those people and institutions in the region taking part in a project. Thus, the research results do not have to be translated into the local vernacular as they are part of the local culture and knowledge. Our goals in the project were connected with the goals defined by our participating partners with the overall joint goal being to help the region to develop into a long term sustainable self-reliant economy. The steady decline in population, although it is far from being de-population, the remoteness to industrial centres in the region, the lack of jobs in the valley, the aging population and loss in infrastructure - all need context specific solutions. The project on flax will certainly not answer all the questions of regional development, however the recreation of the flax history might help to attract some new tourists to the Lesachtal and might create some added value in terms of economy.

What the project has achieved already is to create and support a perspective of cultural sustainability (Krainer & Trattnig 2007), and to enable a community to re-value and re-define regional identity by means of a collective reflection on its own past, and consequently its own future. This perspective is very much based on specific and concrete products and processes. To re-enact a traditional work process in producing a textile fabric not only gives sense and meaning to a building (“Brechelhütte”) but also relates to the cultural landscape for cultivating flax and to the complex traditional knowledge that local elderly people can provide. A sense of community and a strengthened local and regional identity are the culturally sustainable results of the project. The project received a sustainability award from the Austrian UNESCO Commission in 2014. Furthermore, the participating pupils were given the award of Sustainability Ambassadors by the federal state of Carinthia.
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