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Community-based planning in a dynamic landscape development; a teaching experiment

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Abstract:

In a four-week studio, second-year bachelor students get acquainted with an approach for an operational plan in a Problem Based Learning Environment. In the course set-up each student represents a stakeholder. Based on input, ideas and vision from stakeholders students try to create a development plan and process, after a landscape analysis and supported by a societal cost-benefit analysis. The students act and think as a (front stage) stakeholder but in the meanwhile doing (backstage) research and analyses, discussing and reporting from an academic point of view. This year, the Brainport Park Cooperative (BPC) in Eindhoven is central. The challenge in this year's studio is to mimic a community-based planning approach, central in the BPC approach. A core objective of the BPC is to offer space for development to all entrepreneurs, citizens or whoever wants to start and continue this to be beneficial for the community and for the landscape. The landscape is the theatre to host and induce developments. The community of citizens, entrepreneurs, visitors, NGO's, etc. are the actors. The (local) government should only restrict themselves to facilitate the necessary legal aspects. Because of the available four weeks it will be a pressure cooker situation; the students are either a representative of stakeholders, or one of the (key-)players in the area, with their own ideas and approaches. Are they capable while being a (relative) outsider of the area to be part of that community? Will they have impact on the area development? Is there a community-based planning framework to be applied related to a dynamic landscape development?

Keywords: Community-based Planning, Dynamic Landscape Development, Student Participation, Transdisciplinarity

1. Introduction

In the curriculum of the Spatial Planning Specialisation at Wageningen University different courses are linked with external, non-academic questions. These approaches are often described as a Problem Based learning Environment (see e.g. Carsjens et al., 2013; van der Knaap, 2014) or as a Regional Learning Environment (Oonk and Gulikers, 2014). The course Studio Operational Planning is a course, halfway in the second year of the bachelor program. The studio covers a four-week full time educational period in which students should get acquainted to design a landscape development plan to become effective in a short-term period.

During the last five years a commissioner from outside the university was involved in the course. He or she presented a current societal issue as an assignment for the students and they (or their representatives) have interactions during the course with the students. Within the set-up of the Studio, each student represents an interest of a specific stakeholder. Based on their input, ideas and (interpreted) vision the students try to create a landscape development plan and a process plan based on a shared group vision, as well as a landscape and network analysis, together with a societal cost-benefit analysis. The students try to act front stage and backstage (Boyd et al., 2015); they have to act and think as a stakeholder (front stage) but in the meanwhile doing research and analyses, discussing, reflecting and reporting from an academic point of view (backstage).

We started this year to work with the Brainport Park Cooperative (BPC). This cooperative was introduced by the Education Project Services of Wageningen University, a service organisation that mediates for external questions into the academic educational program. Projects via Education Projects Services can present a new perspective upon the issue at hand and provide interesting recommendations for the students as well as the involved stakeholders. We wanted the challenge of this year's studio to be to think about and stimulate a Community-based planning approach. This approach is at the heart of the BPC, it is the way the BPC is organized and functions. Given the only four educational weeks it have to be a kind of pressure cooker situation, maybe with the students being a representative of a stakeholder, or as one of the (key) players in the area, having their own ideas and approaches. Are they capable while being a (relative) outsider of the area to be part of that community? Will they have impact on the development in the area?

Community-based planning is extensively described in literature, for instance by Lane and McDonald (2005), Ansell and Gash (2008), Emerson et al. (2012), Opdam (2013) and Koontz and Newig (2014). Most of these articles describe a more theoretical approach and a governmental driven or at least initiated or induced process. The participation of the (local) community is only part of a more governmental approach. In the Brainport Park case the government is actually one of many participants, or even will not be part of the process at all, only for formalising legal aspects. One of the objectives of the BPC is to offer space for development to all entrepreneurs, citizens or whoever wants to start and continue this to be beneficial for the community and for the landscape. The landscape forms the scenery to host and induce developments. The community of citizens, entrepreneurs, visitors, NGO's, etc. are the actors to create the theatre. The (local) government should only restrict themselves to facilitate the necessary legal aspects.

In my contribution for the conference I want to share my findings around the link between Community-based planning, as a democratic approach towards landscape development, combined with time-limited educational activities, based on the developments in Brainport Park as an inspiring, actual case. The challenges, faults and limitations will be brought forward and discussed. How democratic can the process be? The BPC case is intended to be an educational environment for several years, so we also have the opportunity to build up a more solid research case around Community-based planning. We have to identify which elements can or might be important to be monitored. Suggestions are more than welcome. Other questions remain, such as: Can a second-year bachelor student already perform on that level in a landscape-community theatre, being inspired by his/her own ideas or as representative of certain stakeholders either front- or backstage? Is there a Community-based planning framework that can be applied related to the dynamics and democratic development of landscapes? Or is this impossible?

2. Background

There are several theoretical aspects to be considered in this process. First of all the aspect of Community-based planning (CBP) will be highlighted to some extent. There is an extensive amount of literature about CBP, but not so many linked to landscape developments, and especially with an ecological point of view (Opdam 2013). The Brainport Park Cooperative wants to specifically integrate ecological and economic developments in sustainable landscape developments. The paper by Liu and Opdam (2014) puts explicitly ecological landscape development central in a Community-based planning approach and is used therefor as a starting point in the first section. Next, social learning is often mentioned as an important element in a CBP process. To elaborate on this aspect, an overview paper by Reed et al (2010) will be followed. Another aspect linked to CBP is the ongoing debate about transdisciplinary research as a science-society interface to support knowledge development. This will be discussed in the third section and is largely based on a special issue about this topic in the journal Futures (Lawrence, 2015). A fourth aspect is the educational point of view connected to these three aspects, how to mingle this in an educational (academic) setting. This will be touched upon in the fourth section of this chapter.

2.1 Community-based planning

The spatial planning process in the Netherlands (and also in other Western European countries) is gradually shifting from a top-down led structure to a governance model; from the national government as leading party towards local governments as initiator and facilitator (see among many others, van der Valk 2002; Roodbol-Mekkes et al 2012; Alpkokin 2012; Gerrits et al 2012; de Roo et al 2012; Olesen 2013; Opdam 2013). More and more other groups and stakeholders are included in this planning process, from being one of the partners to even become the major initiator. Community-based planning (CBP) is a next step in this process of further disentangling governmental control on landscape developments. According to Liu and Opdam (2014), community-based planning "*refers to a flexible, collaborative and adaptive planning system that intends to reshape the landscape according to the wishes of stakeholders for higher quality of life and long-term sustainability. It aims to achieve environmental sustainability while meeting social needs and societal values through landscape change*." They continue by stating that the conventional, linear planning approach should change into a more cyclic planning process, to stress "*a reflective and dynamic problem-solving process, in which re-evaluation of predefined goals according to the methodological feedback and monitoring results is applied.*" To obtain a smooth process it is essential to well coordinate the divers (collaborative) action steps in order to result in a long-term sustainable landscape change. They suggest in this sequence four main activities: objective setting, design, implementation, and evaluation. In each of these activities an environment for mutual learning and discussion is required. Also trust and respect for the decisions taken and the values of others is an essential element to create a more solid collaboration process and to share responsibilities.

Based on the commitment by stakeholders a very divers scope of interests and motives can be encountered, leading to diverging value perceptions and conflicting interpretations of the goal of the planning process. This requires that stakeholders are informed about the different (starting) values of the partners in the process and how these might change during the process. And this information also strengthens the process itself and can be supportive to resolve different conflicts that might arise. Now every involved stakeholder has to be clear about their own value perception, find common values and collaborate in order to reach the earlier defined goal(s). When the understanding of each other is growing the planning process evolves and this should also be beneficiary for the landscape development. These aspects can be identified as important aspects within a social learning process. In the next section this social learning process is elaborated more.

2.2 Social Learning

According to Reed et al (2010) there are many confusion interpretations about social learning. Sometimes only creating an environment in which people can learn from each other during a participation process is already typified as social learning. But only bringing people with different background together to participate at a specific topic is not enough. To indentify a process as social learning, there should at least be interaction from different backgrounds, with different values, perspectives, knowledge and experience, in which everybody is stimulated to be reflexive about their role, implicit suppositions and attitude. This should lead to new (social) outcomes, like improved trust, better adaptation behaviour and attitude, a stronger awareness of social relationships, etc. One has to be aware of the difference between individual and social learning. Each individual has the ability to learn also a result of social interaction with others or in a specific facilitated process like a workshop or a conference. But this does not mean that a social learning process is taken place. Reed et al (2010) argue that to be considered social learning, a process must: " *(1) demonstrate that a change in understanding has taken place in the individuals involved; This may be at a surface level, e.g., via recall of new information, or deeper levels, e.g., demonstrated by change in attitudes, world views or epistemological* *beliefs; (2) demonstrate that this change goes beyond the individual and becomes situated within wider social units or communities of practice through social interactions between actors within social networks; and (3) occur through social interactions and processes between actors within a social network either through direct interaction, e.g., conversation, or through other media, e.g., mass media".*

A community-based planning process will contain these three characteristics as described by Reed et al, but are not necessarily a prerequisite for a good planning process. It seems however inevitable that during or after a such a CBP there will be new insights in how other partners in the process will be involved and participate (condition one), and also will result in changes in the environment, both the landscape and the social environment (second condition). The third circumstance (linked to interaction and communication) is however not so obvious in a CBP, but is necessary in order to bring the process a step further. A reflexive attitude (see eg. Howe and Langdon, 2002; Beunen et al, 2013; Van Assche et al, 2014; Lawrence, 2015 and related articles in that special issue of Futures) by each of the persons involved seems an essential requirement to support a good CBP process.

Next to the social aspects in CBP, also the knowledge component and its related exchange is important. There is in one way or the other always knowledge involved during the planning process. Who is providing for this required knowledge to feed the process? Is it coming exclusively from science and academic literature, or only from (local) stakeholders, including governmental agencies, or will it be a mix? Oonk and Gulikers (2014) reflect upon the current planning profession in which planners have to collaborate with multiple stakeholders from very diverse disciplinary background and with divers interests. They state that the planners have to " cross boundaries" as "*efforts by individuals or groups at boundaries to establish or restore continuity in action or interaction across practices"* (Oonk and Gulikers, 2014, p2). In this planning process it is impossible that one person is an expert in all disciplines and has enough knowledge for it. This person is in need of a collaboration with others to create new knowledge, that goes across boundaries, explicitly addressing the differences between the disciplines. A transdisciplinary research approach seems to offer an appropriate setting for this knowledge provision and exchange. This will be explained in more detail in the next section.

2.3 Transdisciplinary research

This section is mainly based on a special issue about transdisciplinary research in the journal Futures (Lawrence (ed.), 2015), which was published at the beginning of 2015. Lawrence (2015) in his introduction states that the integration of different types of knowledge and know-how is a core ingredient of transdisciplinary research. Klay et al (2015) recognize that people trained in different disciplines need to develop a common language based on a shared concern for sustainable development. They elaborate on the growing issue about the required knowledge transfer between science and society, in order to move forward in society as well as in science. It requires insights in and for (new) methods and processes that can be relevant for knowledge. This knowledge production has a role in several phases related to a planning process, such as the framing of the problem, the required analysis, and during the implementation and monitoring of interventions. At each phase there should be a cooperation between academics and non-academic participants, be it either professionals, institutions, politics, governments or civilians. This should also reveal hidden agendas of all the stakeholders involved, especially related to their power positions (Zscheischler and Rogga, 2015). Real transdisciplinary research and related projects are still rarely applied, especially with a focus to role of non-scientific partners. Therefor they question the underlying assumption about the added value of transdisciplinary research. There is also the possible lack of support by institutions and politics for the results of these processes (Lawrence, 2015). This could of course be well related to their power positions. Besides these critical notions, Lawrence (2015) also points to the ongoing debate about the meanings and uses of terminology, be it either multi-, pluri-, inter- or trans-disciplinary research. Zscheischler and Rogga (2015) come up with a European description of transdisciplinarity in which all involved persons (academic and non-academic) go beyond disciplinary boundaries by using a shared conceptual framework, to address common problems. It has to be noted that all the papers in that special issue of Futures are having an academic as leading author (Lawrence 2015), although transdisciplinarity is about academic and non-academic working and learning together. This phenomenon can partly be explained by the academic writing tradition and its related pressure to publish.

2.4 Educational aspects

The articles in the special issue of Futures (2015) around transdisciplinarity are most of them concerned with (sustainable oriented) research and projects. There are two papers that deal with the educational aspects around transdisciplinarity, the paper by Boyd et al (2015) about performance aspects and the paper by Balsiger (2015) about costs involved and setting up a new framework in order to determine different types in transdisciplinarity. These two papers especially offer new insights to integrate transdisciplinarity into education. In the paper by Boyd et al (2015) the performance-as-metaphor, as described by Goffman, is used in a class room setting to elucidate transdisciplinarity in an environment not familiar with the approach. The theatre equivalent is applied to imagine different situations. The authors distinguish three elements that provide a starting point: (1) roles and interaction between the cast and the crew (2) the role of the audience and (3) the stage, including what happens front stage and backstage, and its settings. Involved stakeholders can play their role front stage, how they would react in certain specific phases like problem framing and analyses, based on a script they themselves have developed beforehand. Then backstage they can reflect on their role and of others and create on that result evaluations and formulate new intentions for a next performance. Especially in a teaching environment the front stage and backstage approach seems useful to reflect on in a group discussion and an individual reflection paper (Boyd et al, 2015).

Balsiger (2015) notices in his contribution that teaching transdisciplinarity is a costly task, which is overlooked very quickly. One of the forgotten aspects is the extra activities needed extra to the normal academic interactions, which are above the interdisciplinary actions required. First of all you need to cross boundaries within the academic disciplines, but also set up communications and events outside the academic world. This requires extra expertise about theoretical aspects, methodological and practical factors, in a team-like setting to educate the students and improve the relations with and knowledge by the other partners involved, which could cover a wide range of interests. Already at the start much time is needed to start up and maintain relations, to convince and involve different stakeholders to participate in a research environment, in which they have to be available at all possible moments during the educational period, which often covers a condensed period of time. Next to the content related part of a transdisciplinary activity, the management of the logistics and coordination also demand special skills, to indicate possible constraints and alternative ways of dealing with specific situations. To meet all these prospects and limitations Balsiger proposes a framework to support transdisciplinarity, using elements like integration, evolving methodologies and collaboration. He suggests four varieties to facilitate the choice of teaching options and to influence management. These varieties depend on the level of integration (shallow or more deeper) combined with two options for collaboration (narrow or more broader). He distinguishes soft transdisciplinarity (narrow collaboration with shallow integration), inclusive transdisciplinarity (applying a broader collaboration with a shallow integration), reflexive transdisciplinarity (having a deeper integration but a narrow collaboration) and the hard transdisciplinarity (a deeper integration and a broader collaboration). Balsiger illustrates one of these varieties with a classroom simulation exercise. He stipulates that simulations cannot replace the real activities taking place in concrete settings with real stakeholders facing complex problems. But it will give the students at least a view on different mechanisms that could be relevant in a transdisciplinary setting.

3. Case Study area and project in an academic teaching environment

The Brainport Park Cooperative (BPC) started in July 2014 by several entrepreneurs and stakeholders in the Eindhoven Northwest region. The area is around 2000 ha in size, embedded in the surrounding with the city of Eindhoven, the second national airport of the Netherlands and 'het Groene Woud', an area with a mixture for agriculture, recreation and nature elements between 3 larger cities in the South of the Netherlands (see fig 1). Central inspirations and notions within the cooperative are: co-creation/togetherness, honesty/transparency and a colourful approach. These motivations are mixed with four added value principles as returns of investments: inspirational, ecological, society driven and financial. The ecological aspects should be the main driver, economic considerations must not steer developments. The interaction between the involved stakeholders and the landscape should grow organic. The first goals were defined at the start by the local government. The BPC has to take care of building two (slow lane) bridges, one crossing a railroad track and the other crossing the highway A2, both should have great iconic values for the area. But the BPC wants more. They want to start and guide integral developments around a high tech campus/business area, support (new) agricultural use, create and maintain large and small ecological connections, manage roadside verges and support recreational objects. All these activities should take into account the different dynamics in time and place in the landscape scenery. Furthermore, these kind of developments should only be community driven and iterative/cyclic, not a top-down governmental driven activity. In the landscape theatre with some long-lasting elements (like roads, housing blocks, waterways, ecological structure elements), new short-residing elements should appear, thus creating a dynamic landscape based on a democratic input by many different actors and players in the theatre.

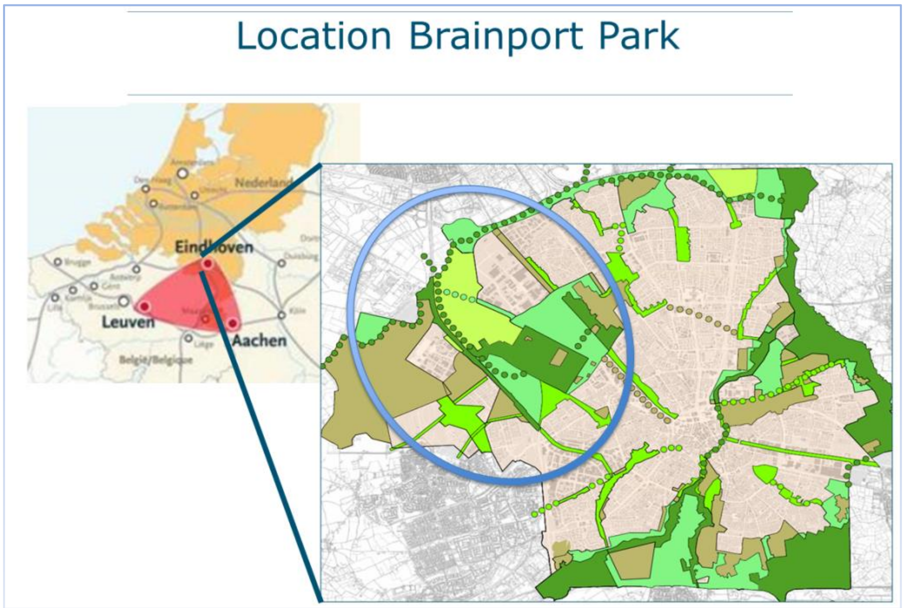

Figure 1: overview of case study area (within the circle)

In the course guide of the Studio Operational Planning (Van der Knaap, 2015) the following profile of the course is presented: "*the Studio is an in-depth planning course, focusing at integration of knowledge and skills presented in previous bachelor courses to support operational planning problems at a local to regional scale level. The course familiarizes the students with:*

- *gathering information on different scales and with different accuracy in limited time, to support qualitative and quantitative analyses of land use and landscape, including biophysical and environmental aspects as well as socio-economic aspects;*

- *developing ideas for further development in a region;*
- *executing a SWOT analysis to find out strong and weak points in the present situation and opportunities and threats for the future;*
- *making an integral plan for a specific region;*
- *making a detailed plan, including social costs benefit analysis, qualitative evaluations, financial arrangements, implementation process and participation options for that region."*

The course will engage the students with aspects of an operational planning process on a local scale. Within this process the students get the challenge to create a vision and its related plan for the case area, based on (interpreted) stakeholder ideas. The course is built around several planning elements, like spatial analysis, actor analysis, SWOT-analysis, development planning, detailed operational planning, sustainable planning and the natural step method. Together, these elements provide the students with a robust toolkit of methods and techniques to engage with several steps within a (participative) planning process. The students will have to integrate the methods and techniques that they learn during the course in several products and reports. Each theme that is discussed during the course will be integrated in at least one of the steps that will make up a final planning design and process description. Using group work integrated plans should be developed and underpinned with process and added value suggestions.

This year's assignment was to propose creative (impulse) ideas for the landscape theatre of Brainport Park, given the initial tasks for the BPC. Scenery and management to create connections (either physical or mental) between the park area, entrepreneurs, and (local) people (including visitors). These ideas should fit in a regional development and should be aligned with business model suggestions, like funding, money spent, income earned, merits. To deal with this assignment the students started with an area analysis, together with an actor and policy analysis and a visit to the park area. They also had a creative session in which they tried to come up with as many (extreme) creative ideas for the area as could be thought of. This was followed by a selection out of the these ideas and get them more focussed. Using a spatial-oriented SWOT analysis the students individually tried to locate the most optimal environment for their ideas, in which the current tasks of the BPC had to be included. The next step was to make an integrated plan, followed by a more detailed plan, for their ideas within the group of four students. The final part consisted of a social cost-benefit analysis (SCBA) of their integrated detail plans. This SCBA should incorporate next to a quantitative part also a qualitative analysis about the qualities for the landscape, environment and society. It should also consist of a suggestion of how to realise the plans, with financially as well as planning process suggestions. In this part the Community-based Planning theories could be well applied. The students ended the course with a reflection paper in which they had to describe the four weeks of education and how well they could perform with the presented structure and the given assignment. Most of the students were able to describe their, sometimes strong, learning curves and the omissions related to a Community-based Planning process. For the students it was the first time they had to deal with a practical oriented situation in which spatial impact and processes were central.

It has to be said that this year's course was not embedded in the theoretical background as describe in chapter two. In the theory chapter I wanted to describe some notions I had in mind when the Studio started, but without any direct translation from theory to a methodological and practical script. I wanted to keep a fresh mind as to how students might act in this new situation, without too many constraints, and perform in the theatre of education with what they had learned in previous courses.

4. Discussion and conclusions

In the introduction several question were put forward. In the previous chapters the theoretical and the educational aspects were highlighted a bit ending with the final remark in the previous chapter that theory about Community-based Planning (CBP) and Transdisciplinarity (TD) was not directly translated to a ready-made methodology framework for the students. The older framework still served as a kind of relict from the older (top-down) approach of the planning process. The Studio of this year was a learning curve for both the students as for the teachers involved. We wanted to see what could be useful and what should be altered given the CBP and TD impact. Especially if we want to use this case area of BPC for a longer period as an educational environment. We also wanted to focus on which elements might or can be important to supervise and monitor in this CBP-TD process. Based on the given theory in chapter two about social learning and transdisciplinarity in the class room, and the presented questions in chapter one, I would like to mention a few focus points, divided over two blocks. One about educational aspects and one more in general about the CPB-TD process, but with education in mind. Planning and design education need to bring forward a new generation of reflexive professionals, that is not only able to make plans and organise planning processes following the top-down planning approach , but they must also be able to objectify spatial planning practices and their own roles and responsibilities within these practices. Reflection can fuel and deepen debates about trends, deadlocks, drives and innovation.

The first point is related to the curriculum in which the bachelor students had to take this class and is related to the question if a second-year bachelor student can already perform on the required level in a landscape theatre. Students were very enthusiastic about working with a real life case situation and about converting part of their earlier gained knowledge into a solution that might be implemented or at least accepted by the practitioners. However, it showed during the course that the students, being in their second year, were not yet fully capable to deal with the kind of issues around CBP and a realistic exchange of knowledge with stakeholders. They miss a sound reflexive attitude to perform fully at the front stage and backstage level, as described by Boyd et al (2015). On the other hand they learn a lot from working in this kind of CBP-environment, even in the more distant way as is was presented during this year’s course. In the next course there should be more and stronger attention to a direct interaction between stakeholders and students. The students missed more discussion with the stakeholders. That will also increase the exchange of knowledge much more. One of the critical points that the students brought forward, was that there was too little (and too late) interaction with the stakeholders. An option that has been discussed after the Studio by the students as well as the commissioner was to stay in the area for at least a few days and not for only one excursion day. This suggestion will unfortunately collide with the university program committee who only offers a one-day excursion for this course, which is in line with the remark by Balsiger (2015) about supposed expenses for a longer stay in the area in relation to management ideas on transdisciplinarity.

A second point that can be mentioned is the performance front stage and backstage, related to their knowledge and exchange of knowledge with stakeholders. By better explaining and experimenting within a short exercise with these two stages at the start of the course they would probably better perform on both stages. Then the students know how to write a script for their performance at the front stage. The students were able, in the end, to act backstage, but there is room for improvement and more profundity in their reflexive attitude. During the course the students were having difficulties dealing with all the different and new concepts. They also missed some content related knowledge about physical and social phenomena, which is offered later in the curriculum. A new set-up of the curriculum next academic year will probably overcome this lack of knowledge. The Studio is then scheduled at the end of the second year program.

A third point concerns the knowledge of the area and related possible interactions with stakeholders by students. To better act as a participant in the area, or as a representative of a stakeholder, it is important to know the area and the people how are active. It takes time to build up that knowledge and gain the required trust, in order to feel connected to the area and its people, mentally and physically, especially in a CBP-TD process. Four weeks is by no means enough; the students have scarcely time to reflect upon their impressions and the involved stakeholders are limited in their available time; over a longer period it will be easier for both groups. It will at least take more than two months, to be better embedded in the area, the people and their hassles. During the evaluation session with the commissioner it was suggested to place the Brainport Park area more central in other courses as well, so the students can build up their area knowledge and stakeholders can get more acquainted with the students. This will definitely upgrade the students acquaintance, but it should be mentioned that students are also keen on very different sites to be central in a course. A differentiation in case study area over courses is also related to the place in the curriculum and the described learning outcomes. Other areas offer other and different items to focus on.

The more general related focus points are concerned with how democratic the BPC process can be. And is it possible to have a community-based planning framework that can be applied or linked to the dynamics and democratic development of and in landscapes? Or is it merely utopian and governmental thinking to have such a framework? There is still a stage manager (or name this position producer or facilitator) required to connect, support and inspire the many different actors and to introduce and facilitate new players and new dynamic developments (see also Axelsson et al, 2013). But (s)he can only act on the basis of community acceptance, being a member of the community, not through dictatorship or being an outsider. All actors involved exchange insights and experiences, learn with and from each other and create new types of knowledge. So when students are part of the actor group they must also be aware of their position and act accordingly. The learning curve for students might well be steep for them with only a few weeks, but for the permanent crew the activities of students should also have an added value.

In a paper by Axelsson et al (2013) suggestions are made for a set-up for a multi-level social learning framework that contains promising elements. They included policy development about sustainable landscapes and rural developments, learning about the related indicators and norms. They have based their set-up on 18 (forest-oriented) initiatives, mainly located in Sweden. A main difficulty was to secure systematic social learning and explicate it at different levels. They distinguish three levels, the local level where projects develop solutions to different issues. The second level consists of learning from these local projects. The third level is made up of general learning, based on experiences from multiple development initiatives and places, in which tacit knowledge is generalised and made (more) explicit. This kind of knowledge (new and its use) will be created when project results are assessed, in order to understand what did work and what did not, which issues were or are still important, where it could have gone wrong. The authors state that this learning process will benefit from transdisciplinarity, including the collaborative process and comparing results to theories and experiences in other places. They also put forward that there should be enough difference in the stakeholder group from sectors, levels, interests, background and learning experiences. All people should be open minded and willing to participate and represent relevant stakeholders. There should be applied a variety of methods, like reflections, discussions, self-evaluations, external assessment of the project and the local initiatives. One should keep in mind that when abstracting the learning process the contact with reality and local stakeholders should be kept. Also the persons included in the process should not be the ‘usual suspects’ that are at all these kind of meetings or the ‘main/current’ representatives. Also building trust is an important element to enhance collaboration (see also de Vries, 2014), while not overlooking the limited equity among the different actors and policies. The authors propose that the first step should be to focus on solving small and easy problems before tackling the larger ones. Maybe comparable projects from elsewhere can be an example.

Another suggestion is brought forward by Ayre and Nettle (2015) for a catchment area in Australia. They focussed on the dynamic process of how to combine and effectively manage diverse disciplinary perspectives and other knowledge(s) in a social learning process for practice and policy change. They come up with five different phases. The first one is to establish the imperative for integration. If there is not enough basis then don’t start. The second phase consists of coordinating the different involved disciplinary and other knowledge commitments. The next step is to consolidate arrangements for integration. Take care that everybody agrees on norms and steps to make. The fourth phase is to prioritise the outputs from the integration process. And then as fifth step start representing the outputs. These phases should be planned in a strategy, but there should also be room for emergent inputs as a result of iterative steps.

There is a great deal of overlap and communality between the different studies. It also shows that these kind of integration and transdisciplinary projects are complex, require good guidance and facilitation, and could be very well time consuming. The question remains how to integrate these sensibly in an educational environment with limited time. This adds an extra element in an already very complex process that is not easy to tackle. We will continue to explore this track of educational transdisciplinarity and social learning in the very near future.

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