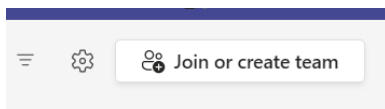




Boundary crossing inspiration meeting Spring 2022:

Recap and lessons learned

From 2018 till 2022, the Comenius Leadership project "*Boundary crossing as modus operandi @ WUR*" has been running. Project leader Arnold Bregt, a core team, and four Bachelor Pilot programs (BFT, BIL, BES, BAS) worked on boundary crossing (BC) learning outcomes, activities, assessment, learning trajectories, teacher training and policy. Currently, BC is spreading throughout the university. This writing is meant to share the many initiatives within Wageningen University, that were presented and discussed during an inspiration meeting in 2022. Additional background information, as well as the presentations and used material, can be found in the BC@WUR: Bigger Group MS teams site. If you want to become a member of this team, use this code in your teams to "join a team" (upper right corner button): **vc3u216**



Please note that a [BC teacher training](#) will be offered again this year, that it is possible to sign up for a BC peer consultation ([Boundary Crossing Rings](#)), and that BC educational material is freely available via: [Edusources/Boundary crossing](#).

Enjoy reading,

BC core team

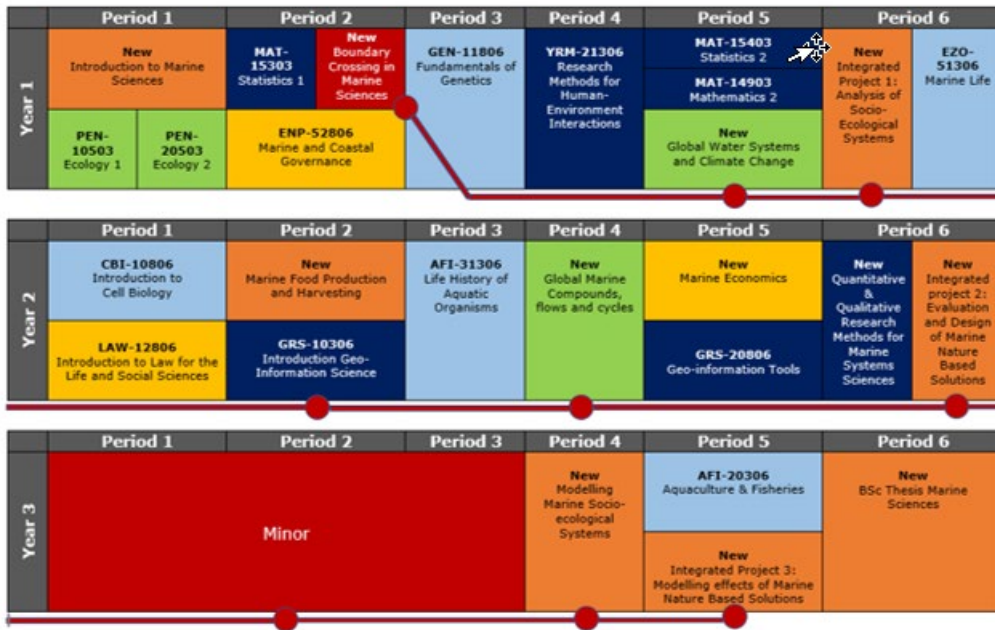
Arnold Bregt, Karen Fortuin, Nynke Post-Uiterweer, Carla Oonk, Cassandra Tho & Judith Gulikers

1. BC ribbon course in the newly developed Bachelor Marine Sciences.

Jan Philipsen and **Jetske Ten Cate** presented the set-up of the new Bachelor programme Marine Sciences. Marine sciences problems are the core of this program, which inevitably requires a lot of boundary crossing across disciplines, cultures and societal partners. This program is interdisciplinary all the way through, by using and working on Marine Sciences problems such as the North Sea Agreement. Becoming a boundary crosser is a key outcome of the program: the student are expected to feel empowered and inspired to stimulate cross boundary learning and working on Marine issues.

For this reason the program is developing a 3 credit boundary crossing course in the beginning of the first year, which is then followed up as a ribbon course all through the program (see the red dots in the figure below). In the red dotted courses, explicit attention is being paid to working on a cross boundary case that trigger students' Boundary Crossing abilities, personal learning goals in this respect and reflection on how the process and product or innovation has gained from working across practices.

The Ribbon course is currently developed in a Design lab with teachers from different programmes supported by ESD/ELS.



2. BC teacher training: Set up and experiences of participants

In order to help students develop their BC competences, teachers should also be trained on their own BC competences and how to facilitate students' BC development. To achieve this, a BC teacher training is currently being offered by the Education Support Centre, and developed in consultation with the BC core team. This training is open for all teachers.

Marieke van Schaik, one of the trainers involved in the BC teacher training, shared on the themes and set-up of the course: raising BC awareness, recognising BC situations, and developing teachers' capacities for training students' BC competence. The course is conducted over half a year, with an online kick-off, self-study, assignments in groups, and live workshops and peer consultation moments. Participants are paired up in duos (or trios), collaborate on assignments and give each other feedback and suggestions.

Solen le Clec'h and **Sarahi Nuñez Ramos**, both teachers at the Environmental Systems Analysis group shared their experiences on the BC teacher training. As they underwent the course, they better understood the BC concept. Consequently they began to see their own course in a new light and saw opportunities for implementing BC elements. Solen and Sarahi are currently working on making BC more explicit in one of their own course, International Study Visits Environmental Sciences. They started to use and design BC material (e.g., knowledge clip or BC-oriented assessment rubric) to develop their students' BC competences, thanks to both the workshop and the peer-consultation parts of the training. They also shared that through the BC teacher training, they realised that they have personally experienced BC.

If you are interested to participate in the BC training for teachers, sign in via [here](#)

3. Mixed Classroom: Boundary crossing between WUR students and Professionals in a course on Managing Public Spaces

- In the mixed classroom, professionals and regular MSc (MLP, MUE, MADE and MGI) students learn together about managing public space. The mixed classroom emerged from the need to professionalize current public space managers and to educate a new generation to deal with the wicked problems in this field. **Marlies Brinkhuijsen** explained that three courses were developed that together prepare for a thesis. The courses are interdisciplinary, they address land use planning, design and management, and are offered in a blended way, with online lectures and activities on campus. The design principles of the courses are active learning, real-life cases,

reflection, group work and lots of structure. Boundary crossing assignments are included to enhance the learning among professionals and regular students. While running the course, it turned out that students can learn a lot from professionals but also vice versa. Professionals had difficulties to step out of their routine approaches, whereas students made use of innovative approaches to tackle a challenge in managing public space. Moreover, professionals needed time to get adjusted to the active teaching methods as used. Teachers, not to forget, seem to perform optimally in the mixed classroom when having working experience in both the university as well as in working practice. In autumn 2022, the educational design of the mixed classroom will be improved in a design project led by **Sarah de Vries**.

5. BSc Responsibility Skills and Boundary Crossing

In this session the central point of discussion was, how can attention to responsibility and BC competence development in WUR education reinforce each other?

Renske Dijkstra, project leader of the BSc skills project introduced the session. She explained that BC competence is related to the BSc skills set that need to be part of every Wageningen University BSc programme. Four categories of skills sets are distinguished: skills related to (i) Communication, (ii) Personal development (iii) Research and (iv) Responsibility. It seems obvious that BC competence and skills could (should) be developed together. On the one hand, BC competence touches upon many skills, and thus BC competency can be developed 'on the wings' of skills. On the other hand, by explicitly working on BC competence development, students will automatically develop skills.

Bettina Bloch, member of the Board of Education explained the background of the attention to responsibility in WUR education. WUR aims to *educate students to become academic professionals, who can contribute to sustainable solutions ... in the domain of 'healthy food and living environment' all over the world, and who take their social, personal and ethical responsibilities seriously* (WUR Vision on Education). She explains that, taking responsibility actually requires looking beyond one's immediate horizon of understanding, action and position. This, obviously, makes a nice link to the boundary crossing project and its fundament introduced by **Karen Fortuin**. She explains that the BC theory and the BC learning mechanisms may provide handles to teach and learn responsibility skills.

All attendees endorse the value of the BC theory and the BC learning mechanisms as a way to teach and learn about responsibility and Renske concludes that "it would be stupid not to combine the implementation of responsibility skills and BC competence development".

6. Discussion Session on how to deal with different BC levels of performance and backgrounds of students in understanding/interest in BC (by Carla Oonk)

In the meantime, various cohorts of students learned about and applied the BC concept in their study programmes. Now the question rises how to deal with different levels of BC knowledge and performance in BSc and MSc programmes. This workshop session led by **Carla Oonk** discussed factors determining increasing levels of BC performance and how to turn these into learning trajectories for continuous BC competence development.

Participants started to explore the BC Rubric (Gulikers & Oonk, 2019) to get acquainted with different levels of BC performance. That could have been enough for a whole workshop...though, we continued discussing complicating factors for BC competence development. Examples mentioned were type and number of boundaries to be crossed (disciplinary; cultural; academia-society); level of 'otherness' to work with (e.g., variety in working habits; intercultural group work in house or in the field); required level of integration and innovation; required depth of reflection.

A few minutes were left to discuss what this means for learning trajectories. When designing learning trajectories, we should consider including extra-curricular learning experiences since they often provide BC learning opportunities. Think about student challenges, but also board or other voluntary work may provide many BC learning opportunities when BC learning goals are made explicit. And how about enabling students to set their tailored personal BC learning goals at several stages in their study

programmes? The BC concept could be studied with the help of self-study materials (see e.g. BC toolbox; knowledge clips) after which personal learning goals can be set for different learning opportunities that students meet. Food for further thought.

7. Boundary crossing competence learning activity and development in the Data Science for Smart Environments course (GRS-35306)

Holly Mellor presented her initiative to trigger Boundary Crossing, and specifically the learning mechanism *Identification*, in her course using the digital tool MURAL. Students work in groups.

Holly used the Boundary Crossing Knowledge clips to introduce BC to the students. Then she asked students to identify their own: knowledge (K), skills (S), attitudes (A) and lacking expertise using different coloured sticky notes on a digital Mural Board. Within groups students make an overview of their K, S, A and lackings and on the Mural board all groups can see this from all groups.

Student groups are asked to take action to overcome their groups 'lacking expertise'. This can be done by looking at the K, S, A of the other groups and making connections to these groups and ask for help. So, Holly used an "identification assignment" and build on that by setting up "Coordination" activities with (members of) other groups. The Mural Board was revisited several times during the course, also in class and by the teacher and coach of the groups.

In the end portfolio, all students were asked to incorporate two concrete examples of the boundary crossing activities they did, how they used the Mural Board assignment for this and how these activities were helpful in what way.

This set up stimulate boundary crossing across student groups within a course. Student are better able to identify their needs and find other students to help them. The teacher also has a better overview of the strengths and weaknesses of groups, can help them in finding each other and also identify common 'lacking expertise' that should be given attention to in the course.

8. BC Edusources: making all BC material available

One of the outcomes of the Comenius Boundary Crossing project is to create and openly share a toolbox with BC materials that teachers can use for inspiration or adapt for their own classes. To accomplish this, the BC core team worked on a pilot with colleagues from the library to create and investigate if a community on the Edusources platform is a viable platform to share the BC toolbox on, as an addition to our own Library for Learning (L4L). This pilot is also part of the national acceleration plan '[Towards digital \(open\) educational resources](#)'. Both the plan and the pilot project contribute to WUR's Open Science and Education programme (OSE).

In this session, **Nicolien Schmaal** (Library) and **Cassandra Tho** (BC Core Team) shared about the process, along with the various considerations, that were part of creating the BC-Edusources community. It was also discussed with participants how to spread the word about the toolbox, how to motivate people to upload materials and what could help to sustain the online community. The BC toolbox is now live and accessible to all – you can check it out [here](#). Below you can get a glance of what is in the toolbox! If you would like to find out more or share your BC materials, please contact boundarycrossing@wur.nl. If you want to know more about open educational resources, please contact [Nicolien Schmaal](#).



Boundary Crossing

Boundary crossing competence, the competence to work together with others outside one's own scientific domain, institute, culture or context, is regarded as one of the major competencies needed by future university graduates in order to respond better to emerging global challenges.

In this Boundary Crossing community, HE teachers, policy makers and researchers share knowledge, experiences and materials that have to do with developing Boundary Crossing elements in courses and in learning trajectories for BSc and MSc programmes. It is designed as an educational 'toolbox' with newly developed teaching materials as well as descriptions of existing practices and process guidelines.

The community, and teacher toolbox, is a spinoff of the Comenius Fellowship project 'Boundary Crossing as modus operandi at Wageningen University' (2018-2021).

For more information, please contact boundarycrossing@wur.nl.

(Note: We are currently in the process of building this community; more materials will follow soon!)

Collections

<p>Collection</p> <p>Knowledge Clips</p> <p>no items</p>	<p>Collection</p> <p>Explanatory Materials on Boundary Crossing</p> <p>no items</p>	<p>Collection</p> <p>Boundary Crossing Learning Mechanisms</p> <p>4 items</p>	<p>Collection</p> <p>Intercultural Boundaries</p> <p>2 items</p>
<p>Collection</p> <p>Interdisciplinary Boundaries</p> <p>3 items</p>	<p>Collection</p> <p>University-Society Boundaries</p> <p>2 items</p>	<p>Collection</p> <p>Showcases of Boundary Crossing</p> <p>1 item</p>	<p>Collection</p> <p>Learning Materials</p> <p>7 items</p>
<p>Collection</p> <p>Building Boundary Crossing into the Curriculum</p> <p>1 item</p>			

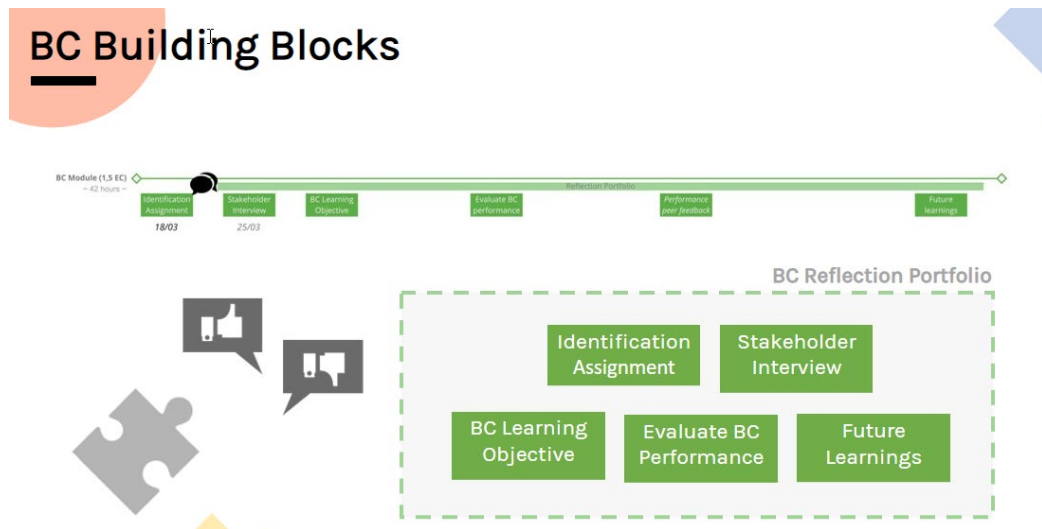
9. Boundary crossing and reflective interviewing in first year bachelor course of BSc Plant Sciences

Jet Vervoort introduced two new assignments implemented in her courses to enhance first year BSc Plant Science students' BC competence. For the first assignment, students are expected to discuss a topic in plant sciences that is highly debated in society (e.g., GM crops, pesticides, nitrogen crisis) with somebody who has a totally different opinion than their own, such as a neighbour, a family member, or a friend of a friend. The students are offered tools to explore opinions rather than starting a debate. Instead of convincing each other of their own opinions, it is expected that both parties explore each other's perspectives. Next the students need to reflect on this experience. One of the students wrote: *"Discussing without trying to win is a bit different than I'm used to. But I think it helps to look for a solution together ... that satisfies both parties. By not trying to win, you can pay more attention to what you agree on instead of where the other is wrong..."*

For the second assignment, students need to interview professionals in field of plant sciences. During this interview at least one BC related questions need to be asked, such as: "In your job, do you ever encounter challenges in communicating and working together with people that have a different expertise or background? If so, how do you deal with these challenges?" Again students are expected to reflect on this and relate the findings to their own future plans. A student wrote: *"Breeders travel all over the world and experience different cultures. So you have to be able to be open to other ideas and cultures. Not only does this help you do your job better, but the people you work with are also more satisfied with you."*

10. 1.5 erts BC building blocks in a transdisciplinary course from the EWUU Alliance: the dairy challenge

In the Dairy Challenge, hosted by the Technical University Eindhoven, in which Wageningen students participate, five boundary crossing learning activities are used that together build of the BC reflection Portfolio. Unfortunately, this session did not follow through during the inspiration meeting. However, **Lianne de Jong** (Tue) and **Carla Oonk** (WUR) will present this course during a later BC inspiration meeting



11. Boundary Crossing in the BITT challenge: multiple disciplines, institutions and external partners

Learn more about the great boundary crossing learning experience of students (from WUR, TuE, UMC) collaborating and co-creating in this bio-tech-med-nutrition interdisciplinary team training, in [this video](#)