



WAGENINGEN
UNIVERSITY & RESEARCH

BC TOOLBOX

Explicating boundaries and boundary crossing learning activities within courses

Use this document if you want to make boundary crossing a more explicit element of (several of) your courses. This document provides you with a format for identifying boundaries and options for boundary crossing in the courses within your educational program. It is best to use this document in a team meeting. With the tables below you go through all the courses in your program to identify several types of boundaries that are present, think about if and how these boundaries are explicitly known to teachers and students and how you want to make adjustments to make boundary crossing a more explicit element of this course.

Author(s)

Judith Gulikers, Carla Oonk & Cassandra Tho

Organization/department

Wageningen University

Contact details

boundarycrossing@wur.nl

Link to BC/place on taxonomy

Building BC into curricular and courses

User permissions

This work is licensed under a [CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/)

Version

Dec. 2018 (Note. At the time of uploading this file to the EduSources Toolbox our thinking on and visualization of the four learning mechanisms has developed further into a more spiral like form, instead of the more linear figure presented in this document. We decided to keep the document as it is, as it helped us and teachers in lot in their first thinking about BC in their courses and programmes).

Explicating boundaries and boundary crossing learning activities within courses

Version 3.0 to be used in the teacher workshops.



This process is the "whole task" that students can / should go through from simple (BSc 1) to much more complex (up to MSc2). Going through this whole task various times and at increasing level of complexity, will in the end lead to the innovative graduate with brokering capacities.

Complicating factors (e.g.):

- Depth of expertise expected
- Number of boundaries to cross
- Different boundaries to cross
- Diversity in stakes to consider
- Balancing between influencing factors
- Embeddedness in research
- Embeddedness in practice (societal impact)
- Societal urgency/delicacy
- Professional and/or personal reflection on learning from the boundaries

Examples of 'simple'- 'medium'- 'complex' whole tasks will be drawn from the teacher meetings.

The boundary crossing learning trajectory

We are developing a boundary crossing learning trajectory in which students learn to cross (different kinds of) boundaries. This means that they need to learn to adopt identification, collaboration, reflection and transformation processes. The disciplinary, cultural, university-society boundaries are three different types of boundaries that students should be confronted with during this learning line.

So, we are not developing 3 different learning trajectories (a cultural learning trajectory, a disciplinary learning trajectory, a university-society learning trajectory).

It is possible that also **other types of boundaries** are experienced (e.g. the academic-business culture boundary during an internship). These other boundaries might also be part of the boundary crossing learning trajectory when they are explicitly addressed as they can also teach/help student to deal with boundaries.

Template

Current situation						Potential improvements	
Year Period	Course	What boundaries	What does the boundary in your course look like?	Is this boundary explicit for: Teacher Y/N Students Y/N	Do you use explicit learning activities to help students crossing the boundaries? If so, which ones?	Ideas for adjustment <i>(can also come up during the teachers meeting)</i>	What learning mechanism (I-C-R-T) <i>(and subprocesses: eg. I1- I2; C1-C2)</i> addressed after adjustments?
Y1; P1		Cultural: yes/no Disciplinary: yes/no Society: yes/no					
Y1; P2		Cultural: yes/no Disciplinary: yes/no Society: yes/no					
Y1; P3		Cultural: yes/no Disciplinary: yes/no Society: yes/no					
Y1; P4		Cultural: yes/no Disciplinary: yes/no Society: yes/no					
Y1; P5		Cultural: yes/no Disciplinary: yes/no Society: yes/no					
Y1; P6		Cultural: yes/no Disciplinary: yes/no Society: yes/no					

Y2 and Y3 in same way

Additional question: Do you experience and implicitly/explicitly use other boundaries in your BSc program? *Note:* Boundaries that can help students develop their boundary crossing abilities: ...

Examples (HYPOTHETICAL!)

Bachelor 1

Current situation						Potential improvements		
Year Period	Course	What boundaries	What does the boundary in your course look like?	Is this boundary explicit for: Teacher Y/N Students Y/N	Do you use explicit learning activities to help students crossing the boundaries? If so, which ones?	Ideas for adjustment <i>(can also come up during the teachers meeting)</i>	What learning mechanism (I-C-R-T) <i>(and subprocesses: eg. I1- I2; C1-C2)</i> addressed after adjustments?	
Y1; P1	Introduction	Cultural: yes Disciplinary: no Society: no	Students start in an international bachelor. They work in student groups of 4	Yes	In all groups students fill in the rubric Intercultural competencies and as a group they formulate 2 learning goals that they as a group will work on.	Add learning outcome to study guide: able to describe what intercultural competencies entail and what they mean to you	C (dependent on the learning goals the group choose, this can also become I or R)	
Y1; P2	Course X	Cultural: no Disciplinary: no Society: no	Consciously left out of the learning trajectory					
Y1; P3	Sustainable food	Cultural: yes Disciplinary: yes Society: yes	In an intercultural group students develop a proposal to make a self-chosen food more sustainable	No	-	After two weeks we have a project meeting in which every student explains what he/she understands about sustainable food from the perspective of their own cultural background.	I – C – (T?)	
			By making something more sustainable, inevitable different disciplines play a role.	No			Adding instruction to the assignment: "increasing sustainability requires knowledge from different disciplines (e.g. From economy, technology, logistics, etc). Make explicit in your proposal what disciplines influenced your endproduct.	I – T
			Students have to do a consumer study	Yes	After having done the costumer study, they have to describe: 1) What new insights arose from the customers. 2) What the added value of the customer study was for their proposal as well as for themselves.		I- C- R – T	

Y1; P4	Course	Cultural: no Disciplinary: no Society: no	Consciously left out of the learning trajectory				
Y1; P5	Course x	Cultural: no Disciplinary: no Society: no	Consciously left out of the learning trajectory				
Y1; P6	Course	Cultural: no Disciplinary: yes Society: yes	-				
			Students receive a case study on water problems alongside the Rhine	Yes	They receive the assignment to analyse and formulate research questions from economic, water quality and water quantity perspective. They propose an approach to deal with the problem in which they integrate knowledge from these three disciplinary perspectives.		I - T
			Students undertake an excursion to a water quality manager of RWS, section Gelderland	No	Student only go here to collect information.	Add instruction to the assignment: "what additional perspective does the water manager add to the three disciplinary perspectives? Why would he suggest taking this additional perspective into account? Or how does his view relate to the three perspectives?"	I- C-R C: being able to ask the right questions to the water manager.

Y2

Y3

Bachelor 2

Current situation						Potential improvements	
Year Period	Course	What boundaries	What does the boundary in your course look like?	Is this boundary explicit for: Teacher Y/N Students Y/N	Do you use explicit learning activities to help students crossing the boundaries? If so, which ones?	Ideas for adjustment (<i>can also come up during the teachers meeting</i>)	What learning mechanism (I-C-R-T) (<i>and subprocesses: e.g. I1- I2; C1-C2</i>) addressed after adjustments?
Y1; P1	Introduction Animal sciences	Cultural: yes Disciplinary: no Society: yes	Students of different nationalities follow this course	Teachers Yes/ Students no	Learning from other cultures = learning outcome (= explicit) However, no learning activity geared to it	Student study a farmer from their own country. Groups of students from different countries review each other's report with the focus question: "what cultural differences do you see between these farmers?"	I - R
			-				
			Students write a report about the problems of a farmer	No		Students interview a farmer in which they ask for the boundaries the farmer experiences (e.g., the consumer wants this, while the government only allows that) Farmer reviews the end report of the students and judges to what extent students properly understood the farmers' boundary dilemmas	I - R
Y1; P2	Animal Welfare	Cultural: no Disciplinary: yes Society: yes	-				
			Viewing animal welfare from various disciplinary perspectives	Yes	Students read literature about animal welfare from different disciplinary perspectives and discuss the differences, pros/cons, and conflicts in groups	Adding instruction to the assignment for discussing the papers in groups: bring into view all different perspectives on animal welfare that are presented in the papers. Discuss which perspective you feel most affiliated with and explain why. Discuss why you think your preferred perspectives may differ (e.g., I come from a farm and I know how difficult it is to have less than 10 chickens on a square meter.)	I- R - T
			Viewing animal welfare from the perspectives of	Yes	Stakeholder debate. Students take on different stakeholders' roles. They prepare and perform a debate	Add a learning outcome to the study guide: Being able to identify various social perspectives on animal welfare.	I-R

			various stakeholders		from their roles' perspectives. In groups of 4, students write an advisory letter to the Minister about how to deal with animal welfare taking into account the perspectives discussed in the debate.	Students can also use the insights from the disciplinary literature assignment into the debate, strengthening certain stakeholder perspectives.	
Y1; P3		Cultural: Yes		No	Can happen, but no explicit goal		
		Disciplinary: yes		No	Can happen, but no explicit goal		
		Society: yes	Students work in an (international) group on an assignment for an external company	Yes	Students have to organise an activity with the commissioner and at least one other stakeholder. The goal of this activity is to collect information from the different stakeholders needed to accomplish the final assignment		I-C
Y1; P4	Mathematics	Cultural: no Disciplinary: no Society: no	Consciously left out of the learning trajectory				
Y1; P5	Statistics	Cultural: no Disciplinary: no Society: no	Consciously left out of the learning trajectory				
Y1; P6	Final Assessment NEW	Cultural: Yes Disciplinary: yes Society: yes	Reflection on all cultural boundary experiences this year	Yes		In a session of 2 hours, we collaboratively look back on the experienced boundaries this year. Collaboratively we visualise what we learned from these boundaries and crossing them. Collaboratively reviewing the BC rubric: Can we identify together examples of experiences in these BC-learning processes? Every individual student describes 2 SMART BC-learning goals for the next year.	R
			Reflection on all disciplinary boundary experiences this year	Yes			R
			Reflection on all societal boundary experiences this year	Yes			R

Y2

Y3

Bachelor program 3

Current situation						Potential improvements	
Year Period	Course	Which boundaries?	What does the boundary in your course look like?	Is this boundary explicit for: Teacher Y/N Students Y/N	Do you use explicit learning activities to help students crossing the boundaries? If so, which ones?	Ideas for adjustment <i>(can also come up during the teachers meeting)</i>	What learning mechanism (I-C-R-T) <i>(and subprocesses: eg. I1- I2; C1-C2)</i> addressed after adjustments?
Y1; P1	Introduction	Cultural: Yes Disciplinary: yes Society: yes	Graduated BC role models explain about their experienced boundaries and how they use and cross all kinds of boundaries in their work	Yes	Explicate BC rubric + BC learning line to students in a lecture. Explain to students that BC is in the 'genes' of the program and will be addressed in various courses and become increasingly complex. Give two concrete examples of boundary crossing courses by describing the "whole task" as adopted in that course Three BC role models (inspiring graduates from the study program) present which boundaries they face in their work and how they deal with these boundaries / what they learn from working across the boundaries		I-C-R-T Make these learning processes explicit in the exemplary descriptions Give the to be invited role models instructions on how to address the boundaries and learning processes in their stories.
Y1; P2		Cultural: No Disciplinary: No Society: No	Consciously left out of the learning trajectory				
Y1: P3		Cultural: Yes Disciplinary: No Society: No	Students choose a country of their preference and analyse how the policy regarding climate change is in that country	No		Add a question to the analysis requiring student to analyse the issue from a cultural perspective: "how does the culture of this country influence this policy?". How is this different or similar to your own perspective?	I-R
Y1; P4	Course X	Cultural: No Disciplinary: No Society: Yes					

			Students make an assignment for a real-world commissioner and its consumers	No		Add a learning goal: Able to integrate different societal perspectives in end product Activity: stakeholder workshop: students make a stakeholder analysis including stakes, interests, influential relations between the stakeholders	I – T (and C and R implicitly)
Y1; P5	Course Y	Cultural: No Disciplinary: No Society: No					
Y1; P6	Course X	Cultural: No Disciplinary: No Society: No					

Y2 and Y3 in the same fashion3

Explicating boundaries and boundary crossing learning activities within courses

Boundary crossing illustrations

Guido Bootz (guido@merkactivisten.nl)

Merkactivisten (www.merkactivisten.nl)

Graphic design of documents

Nicolette Tauecchio (info@nicniq.nl)

Nicniq (www.nicniq.nl)