

2. Literature review

2.1. The roles of students in co-creation

Bovill et al. (2016) classify the participation of student in co-creation at university into four general roles: (i) a representative, (ii) a consultant, (iii) a co-researcher, and (iv) a pedagogical co-designer (see Fig. 2). Following (Bovill, 2020), there are different examples of student participation in co-creation at the university:

- students co-researching university-wide projects and acting as change agents (Dunne et al. 2011),
- students undertaking research and scholarship projects with staff (Werder and Otis 2010),
- student representatives collaborating with university staff on committees for quality assurance and enhancement purposes (Luescher-Mamashela 2013; Buckley 2014),
- students participating in course design review committees (Mihans et al. 2008; Rock et al. 2015),
- students as consultants providing the feedback on teaching observations (Cook-Sather et al. 2014; Huxham et al. 2017),
- students and teachers co-assessing work (Deeley 2014),
- students co-designing courses and curricula (Bovill 2014; Delpish et al. 2010),
- students co-evaluating courses (Bovill et al. 2010),
- students and staff writing collaboratively (Marquis et al. 2016),
- students involved in teaching and designing academic development work (Kandiko Howson and Weller 2016).

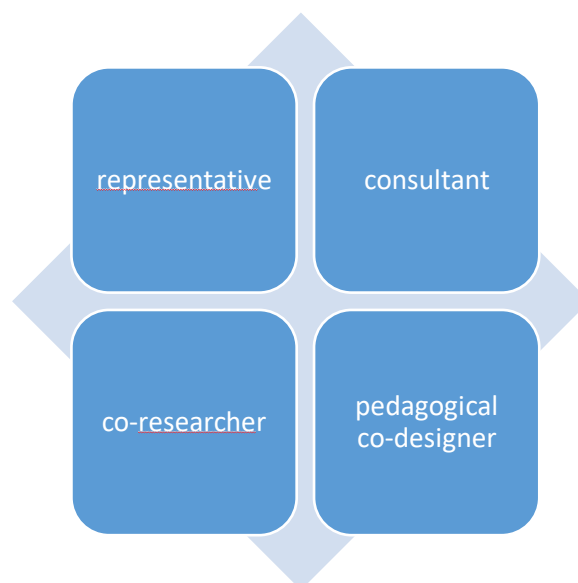


Figure 2 Roles that students adopt in co-creation work (Bovill et al. 2016)

2.2. Models and effects of co-creation

2.2.1. Number of students participating in co-creation

Bryson et al. (2015) distinguish two models of students' participation in co-creation processes:

- Model A: a small selection of students participates in the co-creation process.
- Model B: all the students participate in the co-creation process.

One should consider the following aspects: **which** model will be appropriate for the different roles students are taking on, the **efficiency** of a process with many students and the **incentives** for participating students.

2.2.2. Curriculum co-creation

According to Bovill and Woolmer (2018) the co-creation of curriculum can be organised following two approaches:

- Co-creation **OF** the curriculum: **before** the programme or course takes place.
- Co-creation **IN** the curriculum: co-design of learning and teaching **within** a course or programme, usually during the course or programme.

2.3. The outcomes of co-creation

The outcomes of whole-class approaches to co-creation (Bovill, 2020):

Table 1 Outcomes of whole-class approaches to co-creation (Bovill, 2020):

Outcome	Who?	Source
Improved academic performance or higher quality of work from students	Students	Bovill (2014); Deeley and Bovill (2017)
Enhanced skills for future professional development, including teamwork, critical reflection, and communication skills		Deeley (2014)
Learning beyond the course and transferring learning into new contexts/greater academic aspirations		Bovill et al. (2010)
Opened up the learning process to be more transparent		Deeley (2014); Bovill et al. (2010)
Process was fun		Bovill et al. (2010)
A shift from a focus on grades to learning		Delpish et al. (2010)
Increased confidence, enthusiasm, engagement, and motivation		Bergmark and Westman (2016); Bovill (2014); Bovill et al. (2010); Deeley (2014); Deeley and Bovill (2017)
Increased autonomy, self-regulation, and responsibility		Deeley and Bovill (2017)
Appreciated learning by doing and learning collaboratively with other students		Bergmark and Westman (2016); Bovill et al. (2010)
Practice at working democratically		Bergmark and Westman (2016)

Appreciated being asked to voice opinions		Bergmark and Westman (2016); Deeley (2014); Deeley and Bovill (2017)	
Felt valued		Deeley and Bovill (2017)	
Developed and experienced an equal relationship with the teacher		Bovill et al. (2010)	
Lack of familiarity, shock at being invited to co-create a course		Bergmark and Westman (2016); Bovill (2014)	
Enhanced identity, metacognitive awareness of learning and teaching, inspired, and/or transformed	Students and staff	Bergmark and Westman (2016); Bovill (2014); Huxham et al. (2015)	
Creation of a learning community		Deeley and Bovill (2017)	
Enhanced negotiation experience and skills		Bovill (2014); Deeley (2014)	
Curriculum becomes more (socially) relevant		Bovill (2014); Bovill et al. (2010)	
Student and teacher roles change		Bergmark and Westman (2016)	
Felt risky and unpredictable		Staff	Bergmark and Westman (2016); Bovill (2014); Delpish et al. (2010)
Challenge in getting the pace of teaching right			Huxham et al. (2015)