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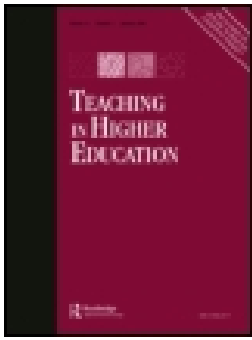
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Do students experience transformation through co-creating curriculum in higher education?

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ABSTRACT

Many studies highlight positive outcomes from curriculum co-creation including its transformational potential for students. In this paper, we explore how curriculum co-creation transforms students, drawing on Johansson and Felten's (2014. *Transforming Students: Fulfilling the Promise of Higher Education*. Baltimore, MD: Johns Hopkins University Press) theoretical framework including four factors of student transformation: (1) disruption of previous ways of working, (2) reflection on experiences, (3) new forms of action, and (4) integration of new perspectives and ways of working. We present our analysis of student and staff experiences of actively engaging in curriculum co-creation at five Scottish universities to understand the ways in which students are transformed through this experience. Our findings focus on four themes of student transformation in curriculum co-creation: developing positive relationships and community; engagement and enjoyment; taking risks and overcoming challenges; and academic achievement and retention. We conclude that the risks and challenges inherent in curriculum co-creation may in fact be exactly those conditions conducive to student transformation.

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Curriculum; co-creation; partnership; transformation; student engagement

Introduction

Interest in curriculum co-creation has increased in recent years and we are witnessing growing evidence of the benefits of co-created curricula (Bergmark and Westman 2016; Bovill 2020a, 2020b; Bovill, Bulley, and Morss 2011a; Lubicz-Nawrocka 2019b). Curriculum co-creation is defined by Lubicz-Nawrocka as '...the values-based implementation of an ongoing, creative, and mutually-beneficial process of staff and students working together to share and negotiate decision-making about aspects of curricula' (2020, 245).

One of the benefits of students being involved in curriculum co-creation processes is that it can result in a range of transformations to the ways students think and practice. Students often experience a shift in metacognitive understanding about learning, and changes to their identities (Cook-Sather, Bovill, and Felten 2014). For some students,

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these transformations go beyond university; indeed, in relation to a partnership project with students, Peseta et al. (2020) report students taking this partnership ‘mindset’ with them into future work and wider community settings. In other, classroom-based co-creation, a student described:

... the more I thought about it, the more it shook up everything I associated with education and learning; how I had done homework, written papers – everything has been completely turned on end. I had been watching my education pass me by without ever taking part ... (Manor et al. 2010, 5)

Students seem genuinely changed by experiences of co-creating curricula.

In this paper, we explore the nature of student transformations associated with curriculum co-creation, using research from a PhD study examining co-created curricula in Scotland. We ask how co-creation approaches can be transformational for students using the theoretical framework presented by Johansson and Felten (2014) as a way of analysing the findings and ideas we present. Throughout the paper, we use the term ‘staff’ inclusively to refer to academic faculty as well as professional services staff who each play active roles in supporting the student experience. Although researchers have different perspectives on the nature of curriculum co-creation and partnership, we recognise that these terms are often used interchangeably so we draw from literature on both curriculum co-creation and student-staff partnerships to explore student transformation. We focus on the processes of co-creating curricula and acknowledge that co-creation involves overlap with the concepts of active learning and student engagement, but it is important to note that curriculum co-creation differs from these concepts in its strong focus on shared decision-making and negotiation (Bovill 2020a, 2020b). Co-creation processes require students to be given more responsibility for sharing decision-making about learning, teaching, and assessment than is often the case with other active learning and student engagement initiatives. Throughout co-creation experiences, students’ perspectives and contributions are valued, and the hierarchy between the teacher and students is reduced.

Curriculum co-creation and students-as-partners work

Curriculum co-creation promotes high levels of student and staff engagement (Bovill 2020b; Bovill, Cook-Sather, and Felten 2011b; Bovill and Woolmer 2019; Lubicz-Nawrocka 2018, 2019b) and has strong overlaps with ‘students-as-partners’ initiatives such those cited in work by Cook-Sather, Bovill, and Felten (2014) and Mercer-Mapstone et al. (2017). Curriculum co-creation and student-staff partnerships in learning and teaching are considered by some to be a niche way of working in higher education, yet these practices are becoming quite widespread (Bergmark and Westman 2016; Bovill et al. 2016; Moore-Cherry 2019). Since collaboration and negotiation require positive relationships between students and staff (Bovill 2020a), dialogic processes underpin how teachers and students share power to negotiate the curriculum (Blau and Shamir-Inbal 2018; Bovill 2020b; Dzubinski 2014; Lubicz-Nawrocka 2019a, 2019b; Phillips and Napan 2016). Co-creation processes of working together based on shared values promotes stronger working relationships between students and staff (Blau and Shamir-Inbal 2018; Kaur, Awang-Hashim, and Kaur 2019; Lubicz-Nawrocka 2019b) and also

between students and other students through formal and informal peer learning (Bovill 2020b; Phillips and Napan 2016; Vaughan et al. 2016).

Curriculum co-creation can promote authentic learning and teaching through culturally and personally relevant ways of working (Lubicz-Nawrocka 2019b; Temple Clothier and Matheson 2019; Towers and Loynes 2018). It is also notable that students and staff often find curriculum co-creation processes extremely enjoyable, meaningful, and rewarding (Dollinger, Lodge, and Coates 2018; Kaur, Awang-Hashim, and Kaur 2019; Lubicz-Nawrocka 2019a, 2019b; Owusu-Agyeman and Fourie-Malherbe 2019; Temple Clothier and Matheson 2019; Towers and Loynes 2018). Curriculum co-creation is widely cited in relation to positive outcomes for students including professional development and employability (Billett and Martin 2018; Dickerson, Jarvis, and Stockwell 2016; Ranjbarfard and Heidari Sureshjani 2018) as well as personal development (Bergmark and Westman 2016; Bovill 2020b; Huxham et al. 2015; Lubicz-Nawrocka 2019b).

Student success and transformation

Kuh's work (2008) researching high-impact educational practices that promote student engagement has been influential, including practices such as: participation in common intellectual experiences, learning communities, undergraduate research, collaborative assignments and projects, global learning, and community-based learning. Student success is facilitated when staff and students each take responsibility for student engagement, and when staff believe in students' abilities and provide supportive learning environments that facilitate their resilience, inspiration, and success (Bain 2004; Johansson and Felten 2014; Lubicz-Nawrocka and Bunting 2019). These factors can influence students' motivation to learn, degree completion, and academic success (Kuh 2010).

Barnett (2004, 523) argued that students' success in higher education should be based not only on enhancing their subject-based knowledge and skills but also on their sense of *being*. He defines *being* as including human qualities, dispositions, attitudes, capabilities, and a sense of identity that will support their contributions to wider society. Well before the Covid-19 pandemic, Barnett (2004) wrote about the concept of 'supercomplexity' to highlight how the world is changing at a pace faster than ever before – which is perhaps even more true today – and he advocated for curricula that focus on knowledge, skills, and *being* to help students succeed and adapt with the ever-changing, unknown world. However, a 'curriculum for supercomplexity ... [is one where] the actual learning processes themselves will also need to be both high-risk and transformatory in character' (Barnett 2004, 257).

Newman (2012) argued that there is perhaps no such thing as transformative learning, just good learning. And yet all too often learning is not transformative: it doesn't involve the shifts in understanding, the changed mindsets nor the changing sense of identity we referred to in examples of transformation through co-creation outlined in the introduction section. Newman also suggested that transformative learning focuses too often on what happens for the individual (2014), which offers an interesting and relevant critique for us to consider in examining co-created curriculum. Johansson and Felten (2014) also analysed key aspects of student transformation in higher education. They stated (3):

Though not strictly linear in its progression, transformative learning tends to follow four general steps: (1) beginning with a *disruption* of a previous way of looking at the world,

(2) followed by *reflective analysis* of one's underlying assumptions, (3) *verifying* and *acting* on these new understandings, and, finally, (4) *integrating* these new ways of being into everyday life. [italics as in the original]

Johansson and Felten (2014) noted that many experiences at university provide formative experiences for students but, to be transformative, the experiences need to prove more than superficial changes that are long-lasting. Furthermore, universities should not focus on transforming specific beliefs or identities but instead focus on developing students' agency, capacities, and confidence to contribute to wider society (Barnett 2004; Johansson and Felten 2014; Lubicz-Nawrocka 2019b; Moore-Cherry 2019).

Although various researchers have started to highlight the transformative capacity of curriculum co-creation and student-staff partnerships, there are few who analyse the ways in which these approaches to learning and teaching transform students. Hill et al. (2019, 2) suggested that 'transformative learning (irreversibly changing knowledge, emotions, attitudes and behaviour) is prompted through the struggles that are exposed and shared through dialogue in partnership'. This aligns with the work of Johansson and Felten (2014) and others who have described how transformation is often associated with the experiences and processes of persisting to overcome the challenges and risks associated with embracing a different ethos of co-creating learning and teaching (Bovill et al. 2016; Hill et al. 2016; Lubicz-Nawrocka 2019a; Mercer-Mapstone, Marquis, and McConnell 2018; Peseta et al. 2020). In addition, students working in partnership with staff have the opportunity to develop a range of skills and apply what they have learned in practice, resulting in significant changes in their confidence and understanding of their identities as well as to their more personal and professional development (Bovill 2020b; Hill et al. 2016; Mercer-Mapstone, Marquis, and McConnell 2018).

This empowerment and transformation of engaged student co-creators has also been described as the development of self-authorship through students taking responsibility not only for their own learning but for aspects of teaching that affect peers and, potentially, their wider community within and beyond the university (Lubicz-Nawrocka 2019b; Moore-Cherry 2019). In other words, and in contrast to Newman's concerns (2014), co-creation might contribute to transformation of students' learning, identity, and responsibility in relation to, and with, others. Reflection on, and recognition of, the emotions, relationships, challenges, and opportunities in curriculum co-creation are also important aspects of helping students to integrate new facets of their identities into their lives with sustained changes to their perspectives and ways of being (Hill et al. 2016; Lubicz-Nawrocka 2019b; Moore-Cherry 2019).

Research methods

The data from the empirical work were part of a larger, doctoral research study to learn about the nature of curriculum co-creation at Scottish universities, and how co-creation approaches may advance aims for students in higher education. We took a social constructivist approach since we believe that culture has a strong role to play in influencing individuals' interactions with the world around them as they construct different realities and understandings in relation to others (Crotty 1998; Greenwood 1994). We took an interpretivist perspective to understand and analyse individuals' motivations and

experiences of curriculum co-creation (Cousin 2009), as well as being informed by critical inquiry (Lapan 2012) in exploring how curriculum co-creation can disrupt dominant approaches to teaching and course design in ways that bring positive changes to improve higher education outcomes for both students and staff.

This qualitative study involved identifying and speaking with staff and students at five Scottish universities who had been engaged actively in curriculum co-creation initiatives. The part of the study presented here focused on the nature of curriculum co-creation and how it helps participants work towards achieving their aims for students in higher education. Although student transformation was not an explicit focus of this research, it was a prominent theme that emerged from the data, and which led the authors to revisit the data after the completion of the doctoral thesis to focus on the research question: *how is curriculum co-creation transformational for students in higher education?*

At the time of data collection in 2015–2016, 20 examples of curriculum co-creation initiatives taking place at the undergraduate level at Scottish universities were identified, using publications, conference presentations, and word of mouth. These examples were categorised as curriculum co-creation in terms of staff and students working collaboratively to create and share ownership over aspects of curricula, drawing on the work of Bovill, Cook-Sather, and Felten (2011b). Participants who agreed to participate included 13 staff and 11 students who were involved in 15 curriculum co-creation initiatives across eight subject areas including medical and veterinary studies, science (geoscience and biology), and social sciences (politics, sociology, social work, and education). Further details of participants' 15 curriculum co-creation projects are summarised in Table 1. Examples included both of Bovill and Woolmer's (2019) categories of whole-class co-creation *in* the curriculum as it took place – including co-created content, teaching approaches, grading criteria, and assessment – as well as co-creation *of* the curriculum that involved staff working with selected students to enhance curricular approaches and develop educational resources for courses in which the students were not enrolled at that time.

The research received Level 1 ethical clearance from the University of Edinburgh's Moray House School of Education and Sport Ethics Committee, and the study's aims and the voluntary nature of participation were made clear through participant information sheets and consent forms. In most cases, semi-structured interviews were held on a one-to-one basis with the researcher except at one university where it was agreed to hold a focus group discussion with three staff participants and one student participant who had worked together closely throughout a co-creation initiative. During the qualitative data collection, semi-structured discussion topics focused on participants' experiences of the benefits and challenges of curriculum co-creation. Each of the interviews and the focus group data were audio-recorded and transcribed. The extensive qualitative data were analysed while drawing on a constructivist grounded theory approach (Charmaz 2006), using constant comparative methods and NVivo software to identify emerging themes.

Findings

The findings included a wide range of themes, but we focus here on findings that highlighted several themes relating to student outcomes in the form of transformation and development: developing positive relationships and community; engagement and enjoyment; taking risks and overcoming challenges; and academic achievement and retention.

Table 1. Summary of the 15 curriculum co-creation projects included in the study.

Project number	Co-creation project	Subject type	Co-creation types	Students participating	Staff participating
1	Co-created aspects of a course	Social science	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
2	Co-created educational resources	Clinical sciences	Co-creation <i>of</i> the curriculum	Selected student (receiving payment)	Academic staff
3	Staff-supported peer teaching across year groups embedded into courses	Clinical sciences	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
4	Co-created course with community projects	Science and engineering	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
5	Co-created aspects of a course including co-development of resources for a new course	Social science	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
6	Co-created educational resources	Clinical or veterinary sciences	Co-creation <i>of</i> the curriculum	Selected student (receiving payment)	Academic staff
7	Co-created educational assessment	Clinical or veterinary sciences	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
8	Co-created aspects of a course	Science and engineering	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
9	Co-created research	Science and engineering	Co-creation <i>of</i> the curriculum	Selected students (volunteering and gaining professional development skills)	Academic staff
10	Student learning and teaching consultants	Various: social science/science and engineering	Co-creation <i>of</i> the curriculum	Selected students (volunteering and gaining professional development skills)	Academic staff and academic developer
11	Co-created aspects of a course including marking criteria	Social science	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
12	Co-created community projects with co-assessment by staff and student	Social science	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
13	Co-created aspects of a course	Science and engineering	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
14	Co-created aspects of a course including marking criteria	Social science	Co-creation <i>in</i> the curriculum	Whole cohort (earning course credit)	Academic staff
15	Co-created aspects of a course	Social science	Co-creation <i>of</i> the curriculum	Selected students (volunteering and gaining professional development skills)	Academic staff and academic developer

Developing positive relationships and community

A key factor influencing the transformational outcomes from co-created curricula is the close interactions developed between teachers and students, and between students and other students. There is an enhanced sense of community, shared responsibility and accountability focused on learning and teaching. Student 7 stated:

Having that close interaction with professors, you're held accountable for more. ... There was less room for me to casually do it or just pass by, which in other classes that's easier to do if there's less accountability and trust ... Now when I'm even just writing an essay, I hope I have a certain responsibility to make sure it's the best work I can do.

This student's experience of close relationships involved in co-creation seems to have extended to transformations in their wider engagement with learning outside the co-created course (see step 4 of Johansson and Felten's transformation process). Also referring to the importance of positive relationships between staff and students, Staff 4 described 'a fantastic synergy and collaboration with the students'.

The relationships and experiences of co-creating curricula with staff are often quite a contrast with other classes for many students. Student 8 highlighted this:

... with this course, there's almost a completely blank page and you can do whatever you want with it. I think in terms of engaging with the lecturers and the client as well, it made you feel a bit more than just a student which was nice.

This student's experience of sharing ownership leads them to highlight that they are made to feel 'more than just a student', a sentiment shared by many students in this study, in response to being enabled to have more agency and power over decision-making than they are used to. This transforming of students' identities has the potential to both disrupt usual ways of doing things, but also to expand the possibilities of curricula, when students experience changes to the ways they see themselves and each other. Staff 8 explained:

They got caught up in the project and have become much less instrumental about 'what is the bare minimum I need to do to achieve the grade I want to achieve?'

These changes in student identity and enhanced motivation to adopt deeper approaches to learning seemed to be connected to opportunities to make genuine and authentic contributions to the curriculum that are typically not offered to students. For example, Student 10 argued their co-creation experience:

... was a proper collaborative course. We were creating the content of the general studies course, so we felt like every presentation we did, every learning part, we knew it was going to add something concrete and that was a really amazing motivation to work hard ... We knew that they were going to use that to create a really great course, and not just mark it and throw it away and never think about it again.

Staff and students also regularly highlighted the importance of student-student relationships for co-creating curricula. Staff 13 suggested:

the fact that the students are actually engaging with each other, that dynamism that takes place within that relationship ... We get out of that what we thought we were going to see and, to be honest, we got an awful lot more than what we expected.

The data related to this theme around relationships and community seem to be consistent with the argument from Bovill (2020b) that positive relationships in learning and teaching are foundational for co-creation, and that co-creation also leads to strengthened positive relationships. To many students, the sense of shared endeavour, positive relationships and community was transformative because it was so different to the ways they were used to teaching taking place. These factors also contributed to a greater sense of student engagement and enjoyment.

Engagement and enjoyment

The second theme from the findings was the increased sense of engagement and enjoyment from co-created curricula compared with other forms of learning. One staff interviewee (9) argued that her students were more motivated and engaged in learning because ‘they really cared’ about what they were learning. Another staff interviewee (8) stated that co-creating a course enabled greater engagement because the course becomes tailored to students’ interests:

if you engage them in what they are interested in (in part on their terms, though not exclusively, because that has to be a collaboration I think) then they will engage.

In addition, Staff 5 suggested that maybe students engaged deeply because co-creation was new to them:

It’s a lot of fun to be involved with ... I don’t know if it’s because they haven’t had an opportunity to do something like this before ... They do get really stuck in and engaged which is great for us. ... If it’s done properly, it should really benefit the student ...

This comment is interesting, as we sometimes hear colleagues saying that they feel students just expect to be taught and told what to do, rather than wanting to take an active role in co-creating the experience. Our findings and experience do not support the view of the apparent reluctance of students, which staff sometimes highlight as a concern. But we need to acknowledge that co-creation is a disruption to ways of teaching and learning (see Johansson and Felten’s step 1), and whilst this offers opportunities for transformation, it also may require us to provide sufficient time for adjustment. In addition, co-creation is highly context-specific and relies a great deal on the trust, relationships, and sense of community established in a class.

Building community also leads to enhanced engagement, as Staff 11 notes:

... the kind of camaraderie about the group work ... [they] are working together, supporting each other ... We really knew it was working when we were starting to see students coming in two hours early and leaving two hours later because they were working as a group and ... they wanted to all be part of it.

Certainly, student co-creators report that co-creation might mean that they put in more time and effort, but they are willing to do so because of the benefits they experience when feeling more engaged and enjoying learning. For example, Student 5 described:

Everyone who I know who has done the course has loved it ... [and] has been really engaged with it. ... I think a lot of people who don’t do it [the co-created course] see it as a lot of work, but then I think everyone who does do it doesn’t see it as a lot of work because they’re enjoying it. They don’t mind putting the work into it.

The inter-relatedness of enjoyment and engagement in learning, as well as the time and effort spent ‘on task’ during co-creation processes are clear here, and which were highlighted by many staff and student respondents. We know that ‘time on task’ is a key factor in student attainment and success at university (Chickering and Gamson 1987; Kuh 2010), and the increased levels of engagement students and staff describe is likely to be related to the increased shared responsibility, ownership, and motivation students experience in co-creation. It starts to become apparent why co-creation experiences

can be transformational for many students who are not experiencing this kind of engagement and community in other areas of their learning. When the learning environment builds a sense of community and trust – and students are engaged in and enjoying learning – students may also be more prepared to take risks.

Taking risks and overcoming challenges

During co-creation experiences, many students described their experiences as being unlike other forms of teaching and learning they had experienced previously, often resulting in students taking more responsibility for their learning and collaborations. For example, Student 3 spoke about the difference between completing a course feedback form as compared to co-creating curricula by discussing their honest feedback with the teacher:

... it's easy on the course evaluation to just say whatever you want because you're not actually taking responsibility for the impact of what you are saying to the staff member. ... Whereas, if you're having to sit with the person and discuss your feedback [during co-creation], that's ... completely different ...

The trusting environment created during curriculum co-creation often enables students to take more risks. Student 8 argued that 'you have to be willing to put yourself out there' and discussed how he would not normally do so, but he experienced enough support to feel able to try new things. Staff also recognised how co-creation can feel uncomfortable for students when they try something new for the first time. For example, Staff 6 spoke about leading co-creation of grading criteria and negotiating assessment marks with students:

I think it is probably difficult at first because it's something they haven't done before. ... They have to write some critical comments because in the negotiations we will use these comments to justify whatever mark we give.

It seems significant that this staff respondent describes the process of grading as involving marks 'we give', a shift in the language of assessment to recognise the shared negotiation and responsibility for the process, although she also acknowledges that staff have the final say should there be any disagreements since they hold overall responsibility for assessment.

Staff 12 also highlighted the challenge for students in trying new things:

They might be uncomfortable, and they are certainly uncertain ... because it is the first time they have done this enquiry-based learning. ... It does take students time to adapt ... We also need to take a step back and realise you might not particularly like this at this point but maybe next year, or the year after that you will realise why we did that.

This participant also draws attention to the challenge sometimes faced by teachers trying to co-create curricula, to convince students of the value of engaging in unfamiliar and complex processes likely to have transformative positive outcomes. This is despite some reluctance from students to take risks or do something challenging when they remain to be convinced of the advantages of new approaches.

Many students referred to the challenge of working with uncertainty and the unfamiliar. Some students want clear instructions of what to do to succeed with an assessment,

while others have a greater level of comfort with uncertainty. Student 11 described their rich experiences of co-creation:

... we felt like we were lost. And then slowly, slowly you would see everyone taking their roles dividing the project ... I think the purpose of the module wasn't to have students feel comfortable. ... I feel a bit like I am on both sides. I have spoken to staff, I have spoken to students and seen their surprise like 'how did you get to do that?' and my response was 'I don't know, it just happened. It is about engaging, not being afraid of saying what you have to say, trusting other people, respecting other people'.

This quote demonstrates how students' roles can change during co-creation, representing a disruption to their expectations about learning and teaching. This adds some complexity as these shifts in students' understanding and identity can also change students' expectations for what should happen in other courses.

In the context of a trusting environment, Staff 2 also drew attention to how some students try to increase the level of challenge to themselves when having the opportunity to co-create learning and teaching:

... the students engaged with the assessment and actually changed it so it was harder.

Co-creating curriculum is not about dumbing down the nature of what is taught or agreeing that everything students ask for happens. It is about having meaningful dialogue about learning and teaching which is focused on sharing responsibility about learning. A key factor seems to be creating positive relationships based on trust and respect, which act as a foundation to help students embrace academic difficulty.

Academic achievement, retention, and skills development

Each of the themes from the previous sections – including positive relationships, enjoyment of learning, and perseverance in the face of challenges – can contribute to students' academic achievement, retention, and development. The high levels of engagement that are often be associated with co-created curricula can also lead to enhanced retention of students at university and better academic performance. This is particularly the case for students who might not typically be the highest achieving students.

Students 1 and 9 described how co-creation enabled them to revise and consolidate their existing knowledge, which led them to enhance their understanding of difficult concepts. Co-creating curriculum is supporting students to reflect on the pedagogies that help them learn most effectively. Student 7 reflected on the impact of curriculum co-creation on her work:

[I]'s put me at a higher standard ... when it comes to the work I'm doing.

Staff 8 also reflected on students' achievement:

... students have gotten so motivated by what it is they are doing that they have excelled themselves.

By consolidating knowledge and gaining increased motivation through deeper understandings of how learning can be applied in assessments and beyond, student co-creators often excel academically.

Staff reported that some students participating in co-created courses achieved the highest marks they have received throughout all their courses at university, and it may

be the students who are not typically the highest achieving who have the greatest learning gains resulting from co-created courses. Staff 9 highlighted:

Out of the 12 students, five got firsts and seven got 2:1s. For some of those students, it was the best work that they had ever produced. They felt really empowered. ... It can have that hugely transformational effect, particularly on quite good and quite competent students who would probably be quite middling but it just gives them that sense of confidence and often they do really perform well.

Furthermore, Staff 5 described students' development and achievement:

... it's more the middle-of-the-road students ... you get to see them really develop their confidence over the year. Then when you see them present their projects at the end, they're literally different people. ... [Also students] who we find get the best marks are actually the ones whose projects have gone a bit wrong, so they've had to change course in the middle. There's a reflective component of the assessment and that really comes out when they've had to take a step back and think ... In terms of skills, that's probably a much better marker for the real world.

Another staff participant (7) agreed:

... people who were maybe not so high-scoring seem to get the most out of it, be most reflective, and be able to talk more about what had happened in their heads. For them, the transformation was both bigger and they were more insightful about it.

These staff are referring to a potentially powerful outcome of co-creation, in having positive academic outcomes for students. This is particularly transformative for students who typically might not do as well in other classes – they experience significant changes to their motivation to learn through co-creation processes. Co-creating curricula appears to offer exciting possibilities as a more inclusive practice for some students who might not otherwise do so well. Indeed, students describe co-creation as enabling them to show off their best, and students often develop a wider and deeper engagement with the university as a whole.

In addition to academic performance benefits, co-creating the curriculum may offer benefits relating to student retention at university. Student 10 says:

I was actually considering dropping out throughout last year so having this course to look forward to was the main reason why I stayed.

Personal testimony such as this is powerful; students' positive experiences of the close relationships, engagement, community, enjoyment of learning, and enhanced academic performance associated with co-creating curricula is influencing some students to stay at university. This perspective is also supported by Staff 11 who speaks about a similar experience for another student co-creating curricula at another university:

... a lot of things that she felt she was doing in the initial stages [of the undergraduate degree] bored her, so that was very much part of her getting involved with this [co-creation project] ... I think it is fair to say that she would withdraw from university if she wasn't being stimulated.

These findings are more than simply about enjoyment or excitement for learning, but are significant in highlighting the power of co-creation to affect students' persistence with their studies. It is transforming the whole concept of learning for these students.

Discussion and implications of the findings

Returning to our original research question, how is co-creation transformational for students? Johansson and Felten's (2014) theoretical framework describes a typical process of student transformation, which we saw reflected in our data. This included four factors: (1) disruption of previous ways of working, (2) reflection on experiences, (3) new forms of action, and (4) integration of new perspectives and ways of working. In this section, we discuss implications of our findings in relation to these four factors.

Disruption of previous ways of working

For staff, curriculum co-creation requires a change to the way we think about teaching and how we view students, so that we embrace ways of working that position students as valued and respected contributors with whom we share responsibility (Bovill 2020b; Lubicz-Nawrocka 2019b). This can be a positive change for many students who enjoy this disruption to previous ways of working with staff when they are given opportunities to gain more agency and develop mutual trust with staff. We have clearly seen in the data how student participants in this study described the rewarding nature of more equitable working relationships resulting from developing positive relationships and a strong sense of community with both staff and peers.

It is important to note that curriculum co-creation – in being inherently disruptive of previous ways of relating, teaching, and learning – was considered by our participants to be challenging. These findings resonate with literature illuminating the challenges and vulnerabilities that students can experience when engaging in co-creation and partnership work (Bovill et al. 2016; Hill et al. 2016; Lubicz-Nawrocka 2019a; Mercer-Mapstone, Marquis, and McConnell 2018; Peseta et al. 2020). We saw examples of staff participants describing how curriculum co-creation was challenging at first for students as they dedicated more time and effort, adapted to working more collaboratively with staff, and even made some assessments more difficult. Yet, these forms of disruption could be seen as examples of productive struggle that were ultimately considered valuable, once students realised the benefits of learning through co-creating curricula.

Reflection on experiences

This second factor from Johansson and Felten's (2014) framework was perhaps less easy to identify in our study compared to the other factors since it was more implicit. It is also difficult for us to identify how much reflection was taking place during the curriculum co-creation process itself compared to during the interviewing process, but we did see participants reflecting on aspects of student transformation resulting from curriculum co-creation.

Participants' reflections can be seen throughout each the findings sections, particularly when students discussed the effective relationships and ways of working that helped them engage in meaningful learning experiences that motivated them to show off their best work. Participants provided thoughtful reflections on how students engaged at a 'completely different level' (Student 3) and 'excelled themselves' (Staff 8) during co-creation experiences which inspired new forms of action (discussed below) that were particularly impactful in the cases that led to students' academic achievement and retention.

New forms of action

Many participants reflected on how co-created courses tend to foster very different learning and teaching experiences as compared with other courses. Students started to work in less ‘instrumental’ ways (Staff 8) by focusing not only on the knowledge and skills they were developing, but also on the attitudes and capabilities exemplified by Barnett’s concept of *being*. Students develop critical *being* when ‘there is a will to learn on the part of the student; to learn even amidst uncertainty’ (Barnett 2007, 1). We see this in our findings too, in the ‘synergy’ (Staff 4) and ‘dynamism’ (Staff 13) of the collaborative relationships fostered during co-creation that helped many student participants engage deeply with challenging courses by enhancing their intrinsic motivation to do their best work. This is in stark contrast with how some students felt about other courses where they could ‘just pass by’ (Student 7) and that their work wasn’t valued by staff who ‘just mark it and throw it away’ (Student 10).

Curriculum co-creation is a relational pedagogy that revolves around communities built on trust, and which enables risk-taking and learning from challenges (Bovill 2020a; Lubicz-Nawrocka 2019a). Indeed, Biesta (2006, 25–26) has noted the interrelated nature of trust and risk-taking:

... to engage in learning always entails the risk that learning might have an impact on you, that learning might change you. This means that education only begins when the learner is willing to take a risk ... [and] one of the constituents of the educational relationship is trust. ... [Therefore] to suggest that education can be and should be risk free ... is a misrepresentation of what education is about.

When students are engaged in and enjoying learning, and when they are experiencing co-creation within a community where there are high levels of trust, they may be more prepared to take risks. As we saw in the first theme within our findings, curriculum co-creation emphasises building a supportive community. Staff and students highlighted that taking risks can sometimes feel scary but, when supported well, students have opportunities to learn from trying new things and from experiencing productive struggle.

We have seen how students who experience transformation through curriculum co-creation feel ‘inspiration’ (Student 2) and become ‘empowered’ (Staff 9) when they learn and act in new ways resulting from more creative forms of learning and teaching that give them agency. Although they ‘might be uncomfortable, and they are certainly uncertain’ (Staff 12), the sense of trust and community helps support students to overcome feelings of vulnerability by engaging in disruptive curriculum co-creation practices. In doing so, they often develop resilience and a wide range of skills that can support their achievement within academia and long after they graduate.

Integration of new perspectives and ways of working

It is particularly striking to us that students’ heightened enjoyment of and engagement with learning during curriculum co-creation is not superficial. We saw how staff facilitating this relational pedagogy appear to have authentic motivations to cultivate students’ success at university by focusing on engaging students meaningfully in decisions about their own learning experience; this appears to dramatically increase student co-creators’ intrinsic motivation to engage in learning. As a result, without exception, all student

participants engaged in co-creation in this study stated that the co-created course that they experienced was the best course across their university experience. This is convincing evidence that the transformation students experience through their involvement in co-creation is significant.

If that is not compelling enough, the majority of staff participants facilitating curriculum co-creation noted that students who might not typically be high-achieving were attaining the highest marks within their co-created courses compared with all of their other courses at university. This is significant in the implication that co-creation may be a more inclusive pedagogy in its ability to enable less high-achieving students with more opportunities to succeed. Furthermore, curriculum co-creation appears to be motivating and inspiring some students to persist with their studies rather than dropping out of university. They developed knowledge and skills alongside confidence and resilience when they adapted to new, more relational ways of learning through curriculum co-creation, and they integrated their new perspectives and ways of working into their approaches to learning and acting in the world. Our findings resonate closely with existing literature highlighting the transformational potential of a ‘partnership mindset’ (Peseta et al. 2020) or ‘partnership identity’ (Mercer-Mapstone, Marquis, and McConnell 2018) when students share responsibility and step into ‘Third Spaces’ that facilitate not only their individual development but also their ability to have a positive impact on communities within and beyond the university (Lubicz-Nawrocka 2019b).

Conclusion

Often, it is acknowledged that one of the purposes of higher education is to transform students’ ways of thinking about the world and acting in meaningful ways (Johansson and Felten 2014). Indeed, as we noted earlier, Barnett (2004) argued that, for students to develop *being* in order to face a supercomplex world, a learning process that is high risk and transformatory is needed. In the wider research from which our study was taken, we found that curriculum co-creation often helped participants achieve their aims for higher education, which included transforming students and widening the future opportunities available to them. This is congruent with existing research and discussion about how co-creation and partnerships in learning and teaching benefit students, with some suggesting that co-creation and partnership can be transformational.

In this paper we have attempted to explore the nature of transformation that takes place through, and as a result of, co-created curricula. Drawing on Johansson and Felten’s (2014) transformation framework, we have seen how co-creation *disrupts* the usual ways in which teaching and learning are done – disruptions which some students found difficult. We described student and staff *reflections* on their experiences of the co-created learning process – and their realisation of the value of this process. We observed staff and students *adopting new forms of action* – taking risks as they learned to trust one another and new processes of learning. We also witnessed students *integrating* their new perspectives into future ways of thinking and working – such as through adopting new approaches and attitudes to future assessments.

Perhaps most powerfully, we witnessed three key transformative outcomes: we discovered that students in our study – unprompted and without exception – considered the co-created course they had experienced to be the best course they had taken at university;

staff highlighted the positive transformation in assessment performance for students who had previously performed less well; and a small group of students decided not to drop out of university because they were motivated to stay by their engagement in co-created curricula. These are three findings we must not ignore. We do not advocate that every course at university should be co-created – something that may be unrealistic and perhaps undesirable. However, we would argue that we should be taking very seriously the need to provide the opportunity for all students to experience co-creation in at least one of their courses at university. We should also consider the need for staff to experience co-created curricula too. Many staff in our study, and in other previous studies, highlighted the transformative nature of co-creation to their ways of thinking and teaching. Universities will need to think carefully about how they can increase the number of co-created courses offered, and about how they will support staff and students to co-create curricula. Co-creation is challenging and there is bound to be some resistance to changing accepted ways of learning and teaching, but transformation is by its very nature disruptive. In response to Newman's (2012) proposition that transformative learning is just good learning, we would argue on the basis of our results that co-created curricula appears to be transformative, and by association a form of good learning. But we are less convinced that all good learning offers the transformative potential of co-created curricula.

Disclosure statement

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