“Can we not do group stuff?”: Student insights on implementing co-creation in online intensive programs

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Recommended Citation
https://doi.org/10.53761/1.21.2.05
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Abstract
The demand for intensive educational experiences is increasing, necessitating a focus on ensuring quality and providing adequate student support. Increasing opportunities for student collaboration, including teacher/student co-creation of learning materials, has strong potential to increase engagement and support. Given increased interest in co-creation within education and research more broadly, we explored student perspectives on this novel approach within online intensive modes of teaching with a focus on feasibility and implementation. Two focus groups were conducted with students (N = 16), including discussion of their preferences and barriers for implementing co-creation initiatives in an intensive program. Thematic analysis was then conducted, generating five themes. Students see co-creation as beneficial for self-development and connections (Theme 1), but also identify barriers such as its perception as another group assignment (Theme 2). Students believe successful co-creation requires a “type” of student who is intrinsically motivated and career-driven (Theme 3). Concerns exist about co-creation being an additional workload, emphasising the need for clear roles (Theme 4). Students’ views on co-creation vary, with differing opinions on its practicality (Theme 5). The findings suggest that successful implementation of co-creation initiatives requires careful consideration of barriers while addressing student concerns and leveraging their intrinsic motivation. For educators in intensive programs, it is crucial to provide incentives, collaborate on feasible time slots, establish clear objectives and timelines, offer guidance and support, and celebrate student achievements to effectively incorporate co-creation activities. By understanding students’ perceptions and preferences, educators can better support student collaboration, which is crucial for students’ development in intensive programs.

Practitioner Notes
1. Avoid creating impressions that co-creation work is exclusive to “elite” students.
2. Whole-class co-creation may be more inclusive, and educators should balance considerations of student motivation with diversity and equity concerns.
3. Incentives such as reference letters can encourage engagement in co-creation activities, but intrinsic motivation exists and can be leveraged.
4. Time constraints in online intensive programs can be a significant barrier to effective co-creation. Collaborating with students to find feasible time slots that accommodate their schedules is important.
5. Educators may need to lead the project, gradually transitioning to a student-led initiative.

Keywords
intensive, higher education, students as partners, co-creation, online education
Introduction

Intensive teaching modes have become increasingly popular in higher education for their ability to provide a quality educational experience in an accelerated time frame (Kitchener, 2017). Students report positive feedback in these intensive programs when conducted in person, with particular emphasis on the enhanced opportunities for interaction and receiving feedback from teachers (Harvey et al., 2017; Jackson et al., 2022). Several factors within the higher education landscape have contributed to the rise of intensive programs. This increase can be attributed to an increased demand for flexibility from students (Huber et al., 2022) and the COVID-19 pandemic, which brought alternative learning modes into the spotlight (Buck & Tyrrell, 2022). As a result, increasing numbers of students are introduced to intensive modes of education through a fully online format (Kwan et al., 2022; Nerantzi & Chatzidamianos, 2020). Despite the growing familiarity and popularity of online intensive programs (Muir et al., 2019), research on the student experience is scarce. As such, there have been calls for additional scholarly work to address this gap (Kwan et al., 2022; Samarawickrema et al., 2022).

Literature

Online learning, especially in intensive programs, presents challenges that can lead to feelings of isolation and difficulties with time management (Adam, 2020; Muir et al., 2019). An overarching constraint of online learning environments is “transactional distance” (Moore, 2018), which denotes the communicative divide introduced through technology. This divide can minimise opportunities to nurture meaningful educator–student relationships (Adam, 2020; Newell & Adam, 2022). Despite these issues, learners in online intensive programs regard the ability to connect with educators and classmates as very or extremely important (Adam, 2020). This connection has been shown to have numerous benefits, such as increased student motivation, improved learning outcomes (Kaur & Noman, 2020), and enhanced student wellbeing (Kahu & Picton, 2019). As such, it is important to pinpoint opportunities to develop relationships within the constraints of shorter, online educational experiences (Newell & Adam, 2022).

One critical factor influencing these relationships is the design of the intensive learning environment. Intentionally designed, it can foster a sense of belonging and collaboration among students, which aligns with best practice principles for intensive learning modes (Samarawickrema & Cleary, 2021; Samarawickrema et al., 2022). An approach that has the potential to promote relationships within these settings is the introduction of co-creation (Dianati & Oberhollenzer, 2020). This method can increase student voice and choice, and provide more opportunities for negotiation within the learning environment (Newell & Adam, 2022). The opportunity for co-creation thus emerges as a promising strategy for building rapport in online intensive learning contexts.

Academic Editors

Section: Special Issue
Editor in Chief: Joseph Crawford
Senior Editor: Jo-Anne Kelder

Publication

Received: 17 April 2023
Revision: 13 August 2023
Accepted: 15 September 2023
Published: 31 January 2024

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Bovill et al. (2016) define co-creation as “staff and students work[ing] collaboratively with one another to create components of curricula and/or pedagogical approaches” (p. 196). There are several models of co-creation, including co-creation of learning materials within the curriculum (Bovill & Woolmer, 2019). This is co-creation during a course to benefit the current cohort of students (asking students to develop learning materials or decide on assessment topics and criteria). Alternatively, there is “co-creation of the curriculum” (Lubicz-Nawrocka & Bovill, 2023, p. 1745), in which students and educators develop resources or learning experiences for a different cohort of students. In this study, the term co-creation refers to a broad collaborative process where students and faculty members work together to design, develop, and evaluate learning materials (Healey et al., 2014).

Dollinger and Lodge (2020) developed a model of co-creation, drawn from 10 case studies conducted in Australasia. These cases encompassed a range of initiatives, such as peer mentorship programs, student-generated content for university social media, a program-specific co-produced magazine, as well as distinct instances of collaborative design, with one focusing on an individual workshop and another involving the comprehensive curriculum design for a specific program. Dollinger and Lodge’s (2020) co-creation model considers inputs, processes, and outcomes. According to their framework, obstacles to the “process” include time, power imbalances, and the resulting ambiguity in the evolving roles of “student” and “teacher”. Similarly, their findings indicated that a crucial element for effective co-creation was equality in the co-creation partnership, creating a sense of an “equal playground” (Dollinger & Lodge, 2020, p. 540). Their model is yet to be explored in the context of fully online and intensive courses, which may have unique inputs, barriers, and processes.

Benefits of Co-creation

Introducing co-creation has the added benefit of facilitating “a learning community among students and teachers”, which is recommended in intensive learning modes (Male et al., 2016, p. 2). Indeed, engaging students in the co-creation of curriculum materials is considered a transformative experience that builds community and positive relationships (Fortune et al., 2019; Lubicz-Nawrocka & Bovill, 2023). Involving students in the education process can assist both staff and students to have a deeper and more creative understanding of the teaching and learning process (Cook-Sather, 2014), and to develop higher meta-cognitive awareness and a sense of identity (Zarandi et al., 2022). From a student experience perspective, co-creation can result in higher levels of student engagement, motivation, and satisfaction (Curran, 2017; Healey et al., 2014). Students who participate in a co-creation project report greater agency and ownership over their education (Deeley & Bovill, 2017), greater motivation to engage in their studies (Mercer-Mapstone et al., 2017), and a stronger connection to their instructors (Cook-Sather, 2014). Under the outcomes section of Dollinger and Lodge’s (2020) previously introduced co-creation model, the benefits also include employability and self-efficacy for students. Considering all of these benefits, it may be unsurprising that co-creation is reported to positively impact academic performance (Matthews et al., 2019).
Co-creation in Online Intensive Programs is a Novel Concept

Despite extensive study in semester-length courses, research is limited on the role of co-creation in online intensive programs such as a 6-week block. This gap exists even as co-creation presents a promising strategy for effective learning in these unique, time-restricted contexts. The feasibility and effectiveness of implementing co-creation in intensive programs remain uncertain due to their unique pedagogical and logistical constraints (Samarawickrema et al., 2022). This gap in the literature prompted our exploration of the potential for co-creating learning materials within the context of an online intensive program, with a particular focus on understanding the student perspective.

In this context, the findings of Matthews et al. (2019) are particularly relevant. They emphasise the importance of creating shared spaces where learners act as co-creators of change, a concept that resonates with the principles of student-centred pedagogy. This pedagogical approach, centred on empowering learners, advocates for students to be active participants in their education, fostering an environment conducive to such co-creation. The co-creation model is aimed at facilitating a student-centred approach to teaching and learning that is meaningful and relevant to their needs and interests (Matthews et al., 2019). Adhering to the student-centred ethos underpinning co-creation (Bovill et al., 2011), effective co-creation in a specific learning context (in person or semester length) may not translate into another. This holds especially true for alternative modes of education, including intensive modes of study and fully online contexts. Investigating the preferred type of co-creation experience for online intensive learning contexts is novel and has not yet been explored.

Therefore, the conceptualisation and design of any co-creation experience should involve learners as decision-makers. Accordingly, in this study we seek to understand student views on co-creation, including its barriers and facilitators, prior to engaging in any specific co-creation activities. We investigate perceived barriers, anticipated skills development, preferred modes of participation, and potential benefits associated with the co-creation approach. Our findings will contribute to the growing body of literature on co-creation and provide guidance for educators and practitioners seeking to promote active student engagement in online intensive university programs.

Method

Research Question

Our research question is as follows:

How do students perceive their potential involvement in co-creating learning materials within an online intensive university program, including perceived barriers, modes of participation, and anticipated skill development?

Ethical Considerations

Approval was received from the low-risk Human Research Ethics Committee in the School of Psychology at the University of Adelaide (approval number H-2023-07). Before participating, participants were required to read through the participant information sheet with detailed
information about the focus group procedure and data use, ask any questions or raise any concerns, and complete a consent form. All participants provided informed consent prior to participating, and their confidentiality and privacy were protected throughout the study.

Participants
Students enrolled in the Graduate Diploma in Psychology Online (GDP) at the University of Adelaide were eligible to participate in focus groups. Program-wide recruitment was done through announcements into individual courses by a researcher (NVA). The study comprised 16 participants across two student focus groups (female identifying: $n = 14$; male-identifying: $n = 2$; age: 25–53 years; $M = 37$ years). The decision to split the large amount of interested participants followed Kitzinger’s (1995) suggestion that focus groups should aim for between four and eight participants. Demographics were characteristic for the GDP as students must possess an undergraduate degree and are predominantly female. The intensive GDP consists of 10 courses, represented in our sample with participants being in their first course up to the completion of their 10th course. Most participants had completed seven or more courses. The amount of experience in intensive programs (represented by the number of courses completed) is expressed in the data extracts presented.

Data Collection
Two focus groups were conducted with students. The first focus group ($n = 5$) ran for 1 hour and 37 minutes; the second session ($n = 11$) ran for 1 hour and 52 minutes. The decision to exceed the recommended group size was driven by student interest, prompting us to expand from one to two focus groups. The larger focus group size also arose from logistical challenges, as some students needed to reschedule into the second focus group. Although our second focus group exceeded the ideal number of participants, we prioritised student engagement over strict sample size adherence. This approach aligns with a student-centred perspective and acknowledges the unique scheduling challenges our students face. It reflects our commitment to accommodating their availability and recognising real-world constraints in co-creating within intensive courses.

Discussion was facilitated using a semi-structured interview guide, exploring students’ knowledge and experiences related to student co-creation in the GDP. Importantly, this study was conducted prior to any set co-creation activities, fitting with the aim of understanding students’ perceptions of co-creation, including its benefit and feasibility in the context of an online intensive program. In the second focus group, students were provided an example of co-creation to focus the discussion. The interview guides and scenario are available in the supplementary material. The focus group discussions were audio-recorded and transcribed verbatim. Students were provided a personalised reference letter that detailed their contribution to the study, following the focus group.

Data Analysis
The data were analysed using thematic analysis, following the six-stage approach outlined by Braun and Clarke (2021): becoming familiar with the data, generating initial codes, generating initial themes, reviewing themes, defining and naming themes, and producing the report. Thematic analysis is a flexible and iterative method for identifying patterns and themes in
qualitative data. Two researchers independently read and familiarised themselves with the transcripts before engaging in coding. The lead author coded the data, and the second author reviewed and refined the codes. The two researchers then worked collaboratively to generate, define, and name the themes through consensus. NVivo 20 was used to organise the data and facilitate the analysis process.

Rigour
Throughout the process of data collection and analysis, both researchers maintained an audit trail of thoughts, first impressions, and communications between the facilitators during the focus groups. This included a working document recording important communications, initial impressions, and the development of ideas generated collaboratively between the researchers.

Reflexivity
Both researchers are lecturers in intensive (6-week) online programs with an interest in co-creation. The lead author teaches into the GDP and has a background in education research in psychology, including in co-creation. The second author teaches into the GDPA (honours-level program) and has knowledge of co-creation in the context of interdisciplinary work with professionals. Both authors are interested in the use of co-creation to contribute to student engagement and learning.

Results
Five themes were generated through thematic analyses. Each theme is detailed as follows, with extracts illustrating the range of student perspectives.

Theme 1: The Value of Co-creation
Across both focus groups, students considered it important that co-creation activities offered value in the process and generated valuable products. Students discussed the value of co-creation in different ways: value to self-development, value to connection, and to add value to the curriculum. Each of these will be stepped through in turn.

In terms of self-development through co-creation, students first identified an academic advantage in the form of a deeper understanding of core concepts. They suggested that participating in the co-creation process might help them to “deconstruct” these concepts, thereby enhancing their understanding: “deconstructing something always helps you understand it better” (53, female, second course).

However, the development they were most excited about was the enhancement of their teaching skills. They believed the co-creation process could serve as a platform for improving their ability to instruct others. One student noted, “I can see that helping me personally develop … my teaching skills” (31, female, final course). These teaching skills extended to the realm of curriculum design. Students saw an advantage in acquiring this skill, with one student expressing, “learning how to develop the curriculum itself and that’s a skill … I think that’s an advantage, a skill to have” (42, female, final course). Further, the process could potentially cultivate leadership or mentorship abilities, facilitating a role where students could guide their peers. As one student envisioned, “… it would put me in a position where I would say to the class, ‘If you know you need
to talk to someone and the lecturer is busy, I helped make this. If you got a quick question, shoot it to me.’ So, I would be more engaged with helping other students learn” (31, female, final course).

Engaging in co-creation activities was seen by participants as advantageous, especially for the development of teaching skills and a deeper understanding of core concepts. Yet they also voiced concerns about their current educational journey, noticing a gap in opportunities to enhance groupwork skills. As one student critiqued, “I don’t think that the way we get our collaborative hours up is beneficial … But we’re not actually developing skills” (31, female, final course).

The intertwined concepts of enhancing connection and developing groupwork skills among students emerged as key aspects of co-creation’s perceived value. Co-creation, in this respect, appears to serve a dual purpose: bridging the gap in groupwork skill development and simultaneously fostering academic relationships.

Concerning connection, students discussed their belief that co-creation would be valuable in allowing for a connection they felt was lacking in their accelerated online learning environments. Students expressed a strong desire for more personal connections with educators through the co-creation process, aspiring to achieve “close to one-to-one connectivity with the professionals, with the academics” (33, female, seventh course). There was praise for the program’s efforts in offering avenues for students to connect, and some students noted that they had successfully fostered ongoing relationships with peers: “I love hearing that everyone had really great positive experiences connecting with people” (29, female, eighth course).

However, the online format and accelerated pace prevented the formation of steady cohorts, inhibiting the development of deeper connections: “I’ve done a lot of group projects across the GDP … and I’ve gone through three different carousels of students. So, I have not been with the same cohort the whole time” (50, female, final course). The issue of inadequate interpersonal connection will be further explored in the subsequent “barriers” theme.

Finally, our participants emphasised that the value of co-creation is in the output, with the success of any co-creation initiative judged by the product. This value goes beyond the participants directly involved in the process, with benefits extending to the entire cohort. The expectation is that the product should improve the overall educational experience by filling gaps in content, offering real-world applications, and supporting assessment:

... maybe it’s addressing, say, a key concept. And probably the types of things that I would like to see a bit more embedding of would be application of certain concepts. So there is a bit of that through the assignments, but not as much I think maybe working through broader explanations or more specific explanations and examples with some key concepts in the courses. (50, female, final course)

**Theme 2: Barriers to Co-creation in Intensive Programs**

Students perceived several barriers to their ability or willingness to co-create, including its perception as a group assignment, lack of connection, and lack of familiarity with co-creation. Some of these barriers might be general to all efforts to co-create, but some were unique to intensive learning environments. It can be difficult to distinguish issues related to the mode of engagement (fully online course delivery) compared to issues of programs that are accelerated
in nature. In establishing a co-creation experience, it is important to distinguish it from the common perception of it being merely another group assignment. Students spent a lot of time discussing their previous negative experiences in group assignments:

…cause we’re kind of talking about a bit of group assignments here. I think group assignments really, I think they actually impede and a detriment to the progression of potentially a student’s ability to show their … full skills or understanding of the content. (32, male, first course)

Can we not do group stuff? That’s what I felt with the group assignments. I was missing out because I was taking other people’s interpretations on, which sometimes didn’t work, and you didn’t feel like that you could actually do anything about that. (50, female, final course)

The lack of interpersonal connections was another barrier that we identified as unique to accelerated online programs. Students have limited time to foster rapport, with less opportunity to engage in shorter courses. Subsequently, the development of interpersonal relationships (and a sense of community in general) is reduced: “I know for myself that I only just started to connect with other people a few weeks ago. I’ve tried but it’s been really challenging” (29, female, eighth course). Although some participants expressed being able to form good connections, overall, students perceived the reduced opportunities for contact with fellow students as a barrier to their willingness to participate in co-creation. One student suggested “doing a pre-interview and then maybe someone from the institution or even your lecturer can fit people in who have similar aligning values” (31, female, final course). This was thought to be for a number of reasons. If students lack contact with other students, they are less aware of others’ intentions to co-create or whether other students are capable.

Unfamiliarity and uncertainty around co-creation was evidenced by students’ inability to generate ideas for co-creation activities within the focus groups. Students expressed a lack of experience in, and knowledge of, co-creation: “I think it’s almost like, I keep thinking a ‘student ambassador role’, that ambassadorial context” (33, female, seventh course). Accordingly, they may lack the ability to envision new possibilities without further guidance.

**Theme 3: Co-creation for Leveraging and Transforming Student Motivation**

Students recognised the pivotal role of motivation in co-creation activities. It serves not only as a precursor to successful collaboration but also as a result of their involvement. Echoing this sentiment, participants stressed the necessity for students’ motivation to engage effectively in these collaborative processes. Highlighting the collective enthusiasm for co-creation in this group of self-selected (and arguably highly motivated) participants, one student stated, “I know that so many people would like to be part of it and help create something new and improved for future generations of students” (43, female, 10th course).

The transformative potential of learning with an “expert” is recognised by students, with one stating that “I think there is a lot of benefit in a facilitated process from someone who is an expert” (50, female, final course). Students also discussed the anticipated increase in motivation and investment in their coursework from access to an expert other: “obviously we wanted to get the qualifications and get the grades and stuff, but also to learn and to grow as a person. So that’s
the motivation for me at least” (25, female, first course). This collaborative approach brings students closer to educators, offering increased support in their studies: “being able to experience that sense of support within the actual education during the course … then you’re allowed to have that conversation with the educator” (32, male, first course).

These views suggest there is already sufficient motivation in the student body to make these activities successful. Further, student participants expressed their belief that there is a “right” type of student for successful co-creation. According to them, these students are intrinsically motivated and driven by a desire to further their career pathway, rather than merely aiming to achieve high grades:

... I think that would bring in the correct kind of student that we kind of discussed before because the people who focus on getting HDs and getting into their clinical, they’re the kinds of people that are going to be looking for these opportunities to put themselves forward. So, you’d be getting the right kind of students there. (31, female, final course)

However, it should be noted that this perspective is not necessarily shared by the educators involved in the study.

The issue of student selection was also raised, emphasising the need for fairness, diversity, and equality in the selection process. Contrarily, students suggested educators should undertake a selection process, or “… pre-interview [to] establish their motivations and their reasons for doing it” (43, female, 10th course), thereby identifying the “right” students (those who are suitably motivated). Although the concept of the “right” type of student may be debated, our participants viewed motivation and passion as key factors in achieving successful co-creation activities and as key outcomes. According to the participants, engaging in co-creation activities would have a motivating effect on their learning, increasing their investment and building their capacity for future learning experiences: “that in itself is an incentive to actually try hard because there’s an investment and there’s also that collaboration, the rapport building between both student and educator” (32, male, first course).

While identifying what they believed was the “right” kind of student, participants also identified what would make the “right” kind of educator to facilitate a co-creation experience. They stressed the importance of having passionate educators who are committed to creating opportunities for co-creation to occur. There is a perception that it “depends on the tutor or the lecturer that you get … you could have any lecturer, but if they’re not motivated … if they don’t have the passion, then that’s also going to influence how I feel about it” (45, female, ninth course).

Theme 4: “We’re Not Doing Your Job for You”: Hesitance to Shift Roles in the Co-creation Experience

Students expressed some important concerns regarding the co-creation process. These concerns included being perceived as free labour, a hesitation to divert from traditional roles, feeling judged, and lacking voice in the co-creation process. Participants were wary of providing free labour, rather than being active and equal participants in the process – “you are paid as a teacher and I’m here paying as a student, why am I doing the coursework?” (26, male, final course) – and they are “happy to volunteer to do things, but at the same time I wouldn’t ever want to be anybody’s piggyback” (26, male, final course). They were adamant about not wanting to be seen as a mere
tool for educators to achieve their goals, feeling this framing might undermine their inputs in the co-creation process.

There was a surprising reluctance to divert from the traditional roles held in the educational environment. This view seemed to stem from a concern that students would not provide accurate or quality information: “Why am I getting students? … students are not a teacher” (33, female, seventh course). Students expressed some strong views regarding their ability to meaningfully contribute to the co-creation process: “I’m not up for student-led stuff because it can be the ‘blind leading the blind’ and that is not beneficial” (50, female, final course). Specifically, many students perceived that their limited experience and knowledge might constrain their capacity to contribute significantly to the curriculum:

\[I’ve just always assumed that the teacher would know, and I guess it’s that power balance where I just respect their position and that they would know and I don’t. It’s not a huge deal, but I feel like anything that I had to share, they would already know.\] (31, female, final course)

Even within the focus groups, the inclination towards hierarchical relationships seemed to persist among students. As we set the stage for open, unstructured dialogue, students continued to express a need to meet the educators’ expectations, reflecting the enduring influence of traditional academic dynamics. When students talked about any perceived changes to the roles of teacher and student in the co-creation context, they expressed a preference for maintaining the power imbalance:

\[… cause I think that power balance is kind of good to have because that kind of protects the educator as well and their standings as an educator – they do need to have that sort of power dynamic there. However, I think the responsibility when it comes to the educator has to be a lot more, I guess, emphasised.\] (32, male, first course)

This sentiment was shared by students in earlier stages of the program and those in their eighth and 10th courses. There is a contradiction for students holding this view. Students thought having a set “facilitator” would be an asset to the project, which they expected to be fulfilled by the educator. Although expressing interest in maintaining the traditional power imbalance inherent in the teaching relationship, students felt it would lead them to feel frustrated in the co-creation process:

\[I would be worried that my role in the relationship dynamic is “justification girl”. Anything that I suggest, I have to justify it because I am the student and you are the tutor with all your experience, and I would just not want to constantly have to fulfil that role.\] (43, female, 10th course)

Participants felt that being confined to the “student” role raised concerns of personal judgement during the engagement process, possibly because of prior course assessment experiences. Consequently, they feared that their self-efficacy might be adversely affected by this extracurricular experience, especially if the educator were to challenge or dismiss their contributions.

There were some expectations discussed around the role of the student (and some roles they did not want to see) in the co-creation context:
“How can we present this to the students in a way that supports their learning?” That consultative process. But then I’d be quite happy in that stage where that hard work, that groundwork’s been done to start to put in some structure to how that might be delivered or presented … if it was a diagram, or a table, or a video presentation, [as] that professional side of it is done. (26, male, final course)

Alternatively, many students saw their role as predominately one of advocate and adviser. Students may have formed this view from previous initiatives where students select representatives to report to a board of educators or provide feedback in course assessment surveys: “… providing feedback and telling the teacher which things work and which things don’t work” (45, female, ninth course). The “feedback-only” model reflects their limited experience in co-creation.

Theme 5: “It Depends” – Student Vision of Co-creation

Participants provided clear insights into what they believe would ensure a successful co-creation process. These insights underscore the need to tailor co-creation experiences to individual student cohorts, considering factors such as timing, incentives, and project purpose. A participant noted, “having that conversation with the educator and being able to … explore and expand on what they actually want from us” (32, male, first course). Specifically, students suggested that their interest and the perceived success of co-creation projects would hinge on the nature of the activity: “it kind of depends on the specific learning material and even what subjects that would be, or whether it’s statistics or something super technical or something a little bit more interpretive” (29, female, eighth course).

Although students often lacked ideas about co-creation (as outlined in the “barriers” theme), they were nevertheless enthusiastic about the possibility of it. In addition, students had some clear ideas about what processes would assist with successful co-creation: “I would like to see the connection made to industry” (45, female, ninth course). Some practical angles included developing novel forms of assessment with greater real-world applicability:

… brainstorming different types of assessments as well because there are many different avenues you can set up assessments, and these days there’s a lot of challenges that’s come in like Al-enabled platforms and universities at the moment brainstorming themselves how to develop new assessments so that the students are challenged in an ethical and a right way. (42, female, final course)

When discussing the sustainability of co-creation groups, students shared concerns about the potential for exclusivity: “there’s a risk of this kind of activity becoming something that’s highly exclusive. And especially if it goes for the entire duration, it’s like you’ve basically picked your elites and then you’re done” (50, female, final course). Consequently, students exhibited uncertainty regarding their preference between an ongoing co-creator team and intermittent, one-off opportunities for engagement in co-creation. Although some saw an ongoing experience as ultimately beneficial for continuous skill building, they also viewed this as problematic for student equity. This contradicted the concerns around expertise raised in the previous theme, as building capacity might be considered a way of mitigating the “blind leading the blind” concern.
Shifting towards strategies to stimulate future student involvement in co-creation activities, tangible incentives were believed to influence students’ inclination to participate. Students felt that incentives tied to their career aspirations (particularly those that might enhance their prospects for successful entry into master’s programs) could encourage their peers to participate, so they believed a reference letter would be an asset to their CV and reflected a suitable incentive: “a good reference letter, something I could put on my application or even put on my resume” (32, male, first course). Others wanted the opportunity to avoid future group assignments and saw this as a suitable incentive for participation:

... so instead of it being ... a niche group of people ... if it was part of an assignment that you were to work on ... rather than having it just as a niche group, opening it up as an assignment base where it is counting towards your marks for communication. (26, male, final course)

Their view was that co-creation would be more positive than group assignments, and participating in this project should excuse them from another group assignment (as they were thought to be developing the same key skills). The feasibility of this incentive is questionable, as group assignments often involve engaging with key concepts. However, it reflects a positive view of co-creation among students, which is broadly encouraging.

The scheduling of co-creation initiatives surfaced as a controversial factor influencing feasibility. Students indicated that the accelerated pace of their courses left them time poor, affecting their ability to participate fully: “it takes all your, I guess, brain capacity to do that. And I think, yeah, it is at breakneck speed, the 6-week course and capacity could be an issue” (43, female, 10th course). There was also considerable discussion about the ideal timing for co-creation projects. Some students preferred the midpoint of the course, stating that “the halfway point ... you’d want to make it make sense in the context of whatever assessment was happening” (33, female, seventh course). Others suggested the end of the course, framing it as a celebration or feedback session, but also acknowledging the challenge of competing with assignment deadlines. One participant noted, “maybe week seven as it were, one day after, even before you get the results graded” (45, female, ninth course).

However, incorporating co-creation activities during the interim periods between courses encountered opposition. Students considered this time crucial for rest, review, and self-care. As one participant stated, “I’m going to have my holiday and then I’m going to study when I’m on my study time” (31, female, final course). Further emphasising this point, another participant shared their perspective: “self-care and making sure that it’s put in a way that I’m not taking from me, and my version of taking from me would be taking into 2 weeks of my personal time” (26, male, final course). Despite their strong, divergent views on the optimal timing for co-creation, it was clear that future initiatives must consider the preferences and constraints of each unique cohort of students.

**Discussion**

We explored student perceptions of co-creation prior to engaging in activities within the context of intensive courses. Five themes were generated, which provide insights into co-creation’s value, barriers to its implementation, the role of motivation, concerns regarding the nature of the process,
and students’ vision of what a successful co-creation experience should look like. Overall, our findings align well with the model of co-creation developed by Dollinger and Lodge (2020), which separates co-creation into three broad aspects: inputs, processes, and outcomes. This alignment suggests students reflected similar concerns to those outlined in previous studies following co-creation activities and implemented in traditional on-campus courses. However, our findings also provide insight into unique considerations for online intensive programs and for engaging students prior to any involvement in co-creation activities.

Notably, in our sample, students expressed two main points of tension. First, while students wanted co-creation to be equitable and to include a diversity of students and perspectives, they also believed there to be a “right” student for co-creation and only wanted to work with select students (Theme 3). Second, students wanted to be equal and respected partners within the co-creation process, but also wanted to maintain the teacher–student hierarchy (Theme 4).

In the following section, we step through our findings in the context of each aspect of Dollinger and Lodge’s (2020) model, and provide suggestions for educators implementing co-creation within intensive education programs. As our study focused on student perceptions prior to co-creation, much of the content is covered in the inputs section of the model.

Inputs – Individual Considerations

Dollinger and Lodge (2020) outline a co-creation model involving “individual considerations”, encompassing essential inputs: “previous history and experiences, students’ initial perceptions and motivations, and staff aims and motivations” (p. 535).

**Individual considerations: Students’ initial perceptions and motivations**

Our findings suggest that students are intrinsically and extrinsically motivated to engage in co-creation experiences because of the perceived value for other students and for themselves (Theme 1). In our sample, this extrinsic motivation was often linked to furthering their career pathway (Theme 5). However, many students expressed intrinsic motivation for co-creation, and the potential for self-development, which educators can leverage when looking to engage students in co-creation activities. Educators can also encourage intrinsic motivation by communicating skill- and self-development resulting from co-creation (Theme 1). Educators running and recruiting for co-creation initiatives may therefore benefit from considering and explicitly addressing both forms of motivation (Kaur & Noman, 2020).

Providing incentives to encourage motivated students was also advocated by our participants (Theme 5). Extrinsic motivators could be related to anticipated outcomes of co-creation activities. Although it may not be possible in all programs, offering course credit may also be an incentive for students to participate. Bovill (2014) suggests monetary reimbursement could be included in co-creation projects. However, paying students for their time may not always be feasible and may raise other issues of student equity (Bovill, 2014; Mercer-Mapstone et al., 2017). This approach could inadvertently address students’ perception of being exploited for free labour. There may be truth to this view, as an advantage of co-creation is said to be a cost reduction to areas of “teaching service” in terms of creation and production (Ribes-Giner et al., 2016). Previous research report concerns that academics would be replaced by less experienced “cheap labour” (Macfarlane et al., 2018, p. 145). In Theme 5, students suggested non-monetary incentives like reference letters...
are a feasible alternative (and may also enhance employability). Additionally, clear communication in recruitment for co-creation initiatives could help with incentivisation and reduce concerns of free labour (Theme 4).

**Individual considerations: Previous history and experiences**

Educators need to carefully consider their approach to selecting students for co-creation in the initial phases of the project. This is due to the issue of group selection being associated with students’ experiences in group assessments. Students expressed a strong conviction towards equity and diversity in the selection process. However, a contradiction emerged: the sample expressed the need for diversity and equity alongside a view that they would only want to work with a highly motivated student. In Theme 3, this is referred to as the “right” student for co-creation. Some of this contradiction came from past experiences, with a concern that co-creation activities would emulate negative group assessments (Theme 2). The perception of co-creation as merely another group assignment requires the educator to signpost how co-creation is fundamentally different.

Educators also need to outline what the issues in group assignments may be, and how a co-creation experience will aim to mitigate these issues. For example, students were concerned that they would be burdened with an unequal load of work. They were also concerned about having to carry the work of others engaging in social loafing, or having the product not reflect their personal views or investment. Educators can mitigate this risk by facilitating a group charter. There is a potential for reciprocal benefits: providing a good example of “group work done right” may have a flow-on effect into coursework and improve the experience of students in future group assignments. Previous research has suggested a spillover effect of positive communication and collaborative experiences in co-creation into other domains, suggesting this may be possible (Bovill et al., 2016).

**Individual considerations: Staff aims and motivation**

Dollinger and Lodge (2020) emphasised staff motivation, where the goal was to enhance service design and employability. As educators, it becomes imperative to exhibit a clear sense of motivation for such collaborative endeavours, making it apparent to the students who actively participate in these processes (Theme 3). This ensures that the co-creation experience is not only enriching but also inspiring for all involved parties.

**Inputs: Environmental Considerations**

Environmental considerations are key inputs within the co-creation model, encompassing factors such as “platforms and structures, [and] clarity of activity” (Dollinger & Lodge, 2020, p. 535).

**Environmental considerations: Platforms and structures**

Theme 5 suggests students within online intensive programs have strong views on the timing of co-creation activities, but these may vary between student groups. Educators implementing co-creation activities should therefore work with students to decide on a feasible time. It is also important to consider the effects of timing on student wellbeing and engagement, which are impacted by the timing of learning and learning activities (Kahu et al., 2020).

Although timing can also be a challenge for traditional modes of study, these challenges are exacerbated within intensive programs, where course timelines are shorter (e.g., 6 weeks with no
breaks, rather than 12 weeks with 2-week breaks). Similarly, students have less time between course sections (2 weeks, which also serve as orientation weeks for the next course), rather than the extended winter and summer breaks of traditional programs. The program of study therefore imposes restrictions on “course-free” time in which to conduct co-creation activities.

Additionally, many students in online intensive programs are also juggling multiple responsibilities, including part- and full-time work and caring responsibilities, which constrain their availability. Particularly in intensive programs where students are time poor, educators should ensure the purpose and structure of co-creation activities is clear, and account for students needing more initial guidance than educators may expect (Doyle et al., 2019). Doing so will help to ensure the key outcomes of co-creation are met – including a high-value experience for the individuals involved and a high-value product.

Buy-in and successful co-creation ultimately depend on anticipated time commitments. It is important that any educator wanting to integrate co-creation into intensive programs is realistic about the scale of any proposed project. The scale of a project that is possible within a standard-length (semester) course will be different from that of a 6-week course. For example, students may be involved with developing a new assessment item in a standard-length course, but students in intensive courses may only be able to develop one learning resource to support an existing assessment.

**Environmental considerations: Clarity of activity**

Co-creation activities may vary from limited engagement, such as crowdsourcing ideas, through to hands-on involvement in curriculum design (Zarandi et al., 2022). Our students were unclear on what co-creation activities could include (Theme 2), but suggested videos, study resources, and a summary document of key concepts from each module/course (Theme 1). When asked what co-creation could look like in their ideal situation, students struggled to move beyond advisory roles (Theme 4). This was likely due to unfamiliarity with co-creation, with our study suggesting students need examples and scaffolding to understand the concept of co-creation. In the second focus group of this study, we provided one example of what a co-creation project may look like:

> You have accepted a volunteer role in the GDP, working in an extracurricular capacity (i.e., around your existing coursework) in a small group of three students and one teacher. In this teacher–student group, you will be creating a new learning resource to support students with a tricky concept that is assessed in the course. This concept was identified as challenging through prior student feedback. So you will be co-creating learning materials for the course alongside both your teacher and two students.

However, educators should consider that students may see these examples as definitive accounts of co-creation. Educators in online intensive programs may need to provide pre-established, specific activities to set the scene. Presenting a wide range of examples may help to counteract this risk and support the co-design of co-creation activities by students and educators. Such examples can easily be found by consulting systematic reviews (e.g., Zarandi et al., 2022). Future work could build on ours by exploring student ideas for co-creation activities after greater scaffolding and understanding of what co-creation is.
Processes
After “inputs”, Dollinger and Lodge (2020) then outline “processes” for co-creation. These processes include concerns for equity, barriers (encompassing “role confusion, power imbalances, [and a] need for staff guidance”; p. 535) and managing relationships within the process.

Concerns for equity
When embarking on co-creation activities, educators should address the concern of potential elitism associated with such work (Theme 5; Mercer-Mapstone et al., 2017). Embracing a whole-class co-creation approach could enhance inclusivity among students, a perspective endorsed by Bovill (2020). Notably, the favoured strategy involves the scaling up of co-creation efforts (Mercer-Mapstone & Clarke, 2018). It is important to acknowledge that some students held reservations about their roles in co-creation. They expressed the desire to avoid being labelled as “justification girl” whenever contributing (Theme 4). This reflects a broader sentiment that student engagement hinges on the equitable respect for their voices, as emphasised by past research (Lubicz-Nawrocka, 2017).

Barriers: Role confusion/power imbalances/need for staff guidance
As part of the process of “doing” co-creation, the interpersonal element cannot be overlooked. There are specific barriers to successful co-creation that result from a confusion about roles within the co-creation team, power imbalances that emerge from a shifting teacher/student context, and a need to scaffold students towards autonomy (Theme 4).

Co-creation literature emphasises the importance of managing the power dynamic between students and teachers. Specifically, previous studies provided evidence of staff resistance towards a change in the student’s role. Staff members expressed a sense of betrayal in response to a proposed alteration in power dynamics (Macfarlane et al., 2018). Given the importance of equal partnerships noted in Dollinger and Lodge’s (2020) framework, we suggest that educators should ensure roles are clearly communicated from the beginning.

Against this backdrop, our students expressed a preference for upholding the traditional roles of “teachers” and “learners” (Theme 4). Indeed, students advocated for the preservation of that hierarchy, which contrasts with the findings of Dianati and Oberhollenzer (2020). Our findings also contrast with the perspective of Dollinger and Lodge (2020), who identified an “equal playground” (p. 540) as a fundamental element for the success of co-creation. As our sample consulted students prior to co-creation, this contradiction could be because of uncertainty about the co-creation process and roles – common within co-creation (Mercer-Mapstone et al., 2017). Alternatively, it may be due to the intensive or online nature of the courses that may reduce time (Theme 5) and capacity to foster relationships with educators (Theme 2). Researchers of future studies could explore these possible explanations in more detail before concluding that students want an unequal partnership.

Participants were predominately concerned with losing expertise (Theme 4). In online and intensive programs, educators may need to transition students into a partnership role and decouple expertise from hierarchy. Educators can also remind students that while they may not have subject-matter expertise, they are experts on being a student (Verwoord, 2016). Bovill et al. (2016) suggest emphasising the socially constructed nature of roles can help to address the
hierarchy between staff and students during co-creation. We add that educators need to be mindful of the language used to describe our roles. What we call ourselves (referring to ourselves as “teachers” and to them as “students”) during the co-creation process is likely to reinforce that hierarchy.

Educators may also need to start with a stronger leadership role and gradually transition the project to a student-driven initiative (Theme 4). Students preferred the educator to adopt a facilitator role, which mirrored previous research on co-creation. Although students require more structure in the initial stages, the educator should take on a facilitative role while providing respect to student voices (Bovill, 2014).

**Managing relationships within the process**

Perceived value from co-creation included self-development (Theme 1) and relationships with staff (Theme 3). Since a key factor for co-creation success lies within the teacher–student relationship (Dianati & Oberhollenzer, 2020; Tarı Kasnakoğlu & Mercan, 2022), educators in online intensive programs must focus on embedding interpersonal activities throughout the project. For example, educators could organise information sessions that involve activities for students to get to know potential co-creators. This may take the form of a speed-dating type of activity or online breakout rooms where students are encouraged to introduce themselves (and their reasons for wanting to participate). Within these activities, educators can also implement strategies to enhance belonging, such as humanising the learning (or co-creation) space (Newell & Adam, 2022) and providing an ongoing sense of welcome (Samarawickrema et al., 2022).

**Outcomes**

Dollinger and Lodge (2020) also consider the benefits of engaging in co-creation in their model, specifying benefits to students in terms of increased “self-efficacy and confidence, student ownership and engagement, [and] student employability” (p. 535).

**Benefits: Self-efficacy and confidence**

The first aligned benefit was increasing self-efficacy and confidence around the material (Theme 1). However, students also expressed concern around the potential consequences for their self-efficacy and self-esteem if a co-creation activity were to go poorly or require them to engage in continual justification (Theme 4). Previous literature has also found student concerns around self-esteem to be a barrier to co-creation (Zarandi et al., 2022). While co-creation has often been found to increase student efficacy (45% of studies), a small portion (2%) found a decrease (Mercer-Mapstone et al., 2017). These findings suggest that a decrease in efficacy is possible (although unlikely), so educators should be mindful of it.

**Benefits: Student ownership and engagement**

The concept of co-creation was acknowledged by participants as having the potential to cultivate a sense of investment (Theme 3) and ownership (Theme 1) for the materials generated. This underscores the importance of students achieving predefined outcomes. In addition, educators should ensure that students are internalising a genuine connection to the educational process. Integrating reflective activities and discussions that prompt students to contemplate their progress during the co-creation journey can contribute to the attainment of this objective.
**Benefits: Increased student employability**

Students perceived a tangible benefit in co-creation through increased employability (Theme 5). These outcomes are also consistent with those found in the literature on co-creation, which has demonstrated a perceived and measured increase in employment outcomes (Mercer-Mapstone et al., 2017; Zarandi et al., 2022). Even before engaging in these experiences, students thought co-creation would facilitate the development of skills that they believe are not adequately addressed in their current program (group work, interpersonal skills, and teaching skills; Theme 1). The development of job-relevant skills (referred to as “soft skills”) has been found to increase through involvement in co-creation (Bovill, 2014; Zarandi et al., 2022).

**Limitations, Considerations, and Future Research**

A limitation of our study is the self-selection of students. Our participants were willing to donate their time to a study on co-creation, and their views may therefore differ from the study body as a whole. However, these are likely the students who would participate in co-creation activities and whose perspectives would therefore be involved. Nevertheless, researchers of future studies may wish to explore ways of gaining perspectives from more disengaged students to provide more diverse perspectives on co-creation and learning materials that apply across cohorts.

Another consideration is the scenario provided in the second focus group. Although the example provided useful context, some students became focused on it, which may have influenced their perceptions and discussion. Additionally, our study was only an exploration of what is possible in co-creation rather than past work that has considered student perspectives after co-creation activities. This difference may partially explain some contradictions between our findings and previous literature. Consulting students during initial conceptualisation is in keeping with a student-centred co-creation approach. Future research may wish to build on this by exploring all stages of the co-creation process – from initial conceptualisation with students, through to implementation, and upon conclusion of the project.

**Conclusion**

Our focus groups shed light on the feasibility of co-creation initiatives in the context of online intensive programs. Students were generally positive about engaging in co-creation, suggesting educators can leverage students’ intrinsic motivation. Our findings were broadly commensurate with previous models of co-creation, but educators need to consider the unique barriers to co-creation initiatives in online intensive programs, particularly their timing. Educators should also provide guidance on what co-creation could look like and clearly differentiate it from group assessments or feedback from students on teaching materials. Although this study provides initial insight into the perceived value and considerations for co-creation in intensive programs, future studies could involve the examination of the impact and effectiveness of co-creation initiatives in these programs.

**Acknowledgement**

The authors utilised ChatGPT as a proofreading tool to identify spelling, grammar, and syntax errors in the revised version of the paper.
Conflict of Interest

The authors disclose that they have no actual or perceived conflicts of interest. The authors disclose that they have not received any funding for this paper beyond resourcing for academic time at their respective universities.
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