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Research article

The third space, student and staff co-creation of gamified informal learning: an emerging model of co-design

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Abstract

This article draws from the authors' exploration of an innovative third space approach to engaging students with informal learning through the use of co-design and co-creation, which sits outside traditional subject delivery spaces. The third space project, the Digital Citizenship Programme, centres on the transformative experience and dialogic encounter for participants. The third space in this context was constituted by co-design and co-production involving students, alumni, academics and professional service staff. The project evaluated third space activity in terms of co-design, through its development process and in what is achieved by participants' engagement with it. The aims were to analyse the mutuality and relational aspects of the innovative pedagogic intervention; the development of transferable skills and agentic development in the third space; and the dialogic experience for participants. The research data were collected over a period of three years, using focus groups, co-creation workshop observations and field notes. This project builds on the body of research that focuses on partnerships with students that fall

under the umbrella of the third space. The article underlines the importance of co-creation approaches in building the relational and dialogic dynamic in higher education spaces.

Keywords third space; dialogic; relational; co-creation; gamification; students as partners; participatory design

Introduction

> Tell me and I forget, teach me and I remember, involve me and I learn. (Attributed to Benjamin Franklin)

This article draws on the authors' exploration of an innovative third space approach to engaging students with informal learning through participatory design and co-creation outside traditional subject delivery spaces. The intervention provides an example of academic spaces that are not constrained by subject boundaries. In these spaces, the conventional hierarchical relationships of formal teaching spaces are bridged, and academic cultural norms and subject boundaries become blurred. The dialogical and relational dynamic of such boundary crossing is inexorably linked with the third space. The intervention described in this article is delivered in a digital gamified format, with students as well as academic and professional staff as co-creators, co-designers and co-researchers involved in the creation of gamified and playful initiatives (James and Nerantzi, 2019). In this context, we use the term 'co-design' as the highest form of co-creation within a framework of participatory design. Simonsen and Robertson (2013: 2) define participatory design as 'a process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants'. Co-creation, especially collaboration between students and staff from various departments, enhances student engagement and their sense of belonging, embedding a dialogical and relational frame of activity. The data collected for the project highlight that a model of co-design can be seen to be truly innovative.

We have seen through past research (Bamford and Pollard, 2018; Pollard and Bamford, 2021) that students from under-represented groups can struggle to make the social transition to university, with busy lives and local community links outside of university. The extracurricular intervention described in this article was designed by staff and students in a London institution to create an inclusive digital experience that provides opportunities for the recognition of students' development outside the formal curricular boundaries. It offers an active and playful online environment where students can enrol on a voluntary programme of activities – a 'Mission' – and claim badges that contribute to the award of a 'Passport'. The intervention supports the development of transferable skills outside classroom spaces that are third space both in terms of approach and application, operating outside subject and disciplinary boundaries. Students move across academic boundaries through extracurricular activities, and they develop a range of different skills, including employability and citizenship skills. This article provides insights into ways in which projects that utilise working with students can shift both staff and student perspectives of the learning environment, and ways in which the third space offers a frame for the analysis of such projects. Informal learning is seen as a critical aspect of student success, through its contribution to the development of transferable skills in a reflective format, which is so important to the future possibility of employment (Mello and Wattret, 2021).

The third space

While the term 'third space' has its origin in cultural studies (Bhabha, 2012), Whitchurch's (2008) seminal work on identifying the importance of the third space in higher education provides us with a framework for inclusive and creative pedagogic practice. In her more recent work, Whitchurch (2023) identifies that different groups can come together under a common project in which Mode 3, in-practice knowledge, involving feedback from knowledge stakeholders and users, is democratised and co-created. This work utilises Whitchurch's (2008, 2018, 2023) positioning of higher education activities within a third space, which cuts across institutional spaces, knowledges, relationships and legitimacies. As well as drawing on the concept of third space, the article builds on the work of Burns et al. (2019), Lubicz-Nawrocka (2019)

and Lubicz-Nawrocka and Bovill (2023) in a student partnership context, to provide insights into the student as driver in the learning environment, where the customary role of academic and student is flipped. This allows not only for the potential of role reversal, but also for the transitions and agentic development that may follow.

We argue that the third space dimension frames the project intervention that is the focus for the discussion here, the Digital Citizenship Programme. It is an intervention that was developed with a specific focus on student participation and co-design, using 'gaming' inspired and co-creation principles to inform education practice, and thus criticality in action. It centres on allowing for a transformative experience for participating students, and on embedding the dialogic encounter that they experience. The third space in this context was constituted by a co-design, co-production and co-research approach involving students, alumni, academics and professional service staff.

The landscape of gamification in higher education

There is now a well-established tradition and rich body of work on the use of gamification and games in education, including higher education and professional development (Bado, 2022; Bell, 2018; Kim, 2018; Plass et al., 2020). Prensky (2001, 2006) has advocated digital game-based learning approaches for all areas of education, from schools to professional training, and has focused on the motivational aspects of games.

Developing fully fledged digital games is often a technical and financial challenge for many educators, so many practitioners have looked for ways to harness the key motivational aspects of games without having to commit to a major game development project. In this context, gamification and playful learning or playful design have been useful approaches to create learning experiences that motivate and engage learners. Gamification is defined as 'the application of game-design elements and game principles in non-game contexts' (Deterding et al., 2011a: 10; Deterding et al., 2011b), while playful design in learning is focused on embedding elements of play and fun, without producing a structured, rule-based system (Dichev et al., 2015; Whitton, 2018). Gamification combines some of the playful elements and motivational strategies of games with specific content designed to achieve educational outcomes (Majuri et al., 2018; Subhash and Cudney, 2018). The gamified aspects of learning experiences are often based on the use of points or badges, leader boards, challenges and quests, and an immediate and interactive feedback system. Gamification in higher education can be applied to course and programme design, as well as to a wider range of educational experiences that aim to enhance participation and engagement (Adare-Tasiwoopa api and Silva, 2023; Costello, 2020). The key benefits of gamified learning are centred on creating a highly motivational environment and increasing engagement. Gamified learning initiatives can enhance intrinsic motivation by offering highly satisfying experiences that draw on students' own interests. They are constructed on engaging and relatable narratives, as well as on producing extrinsic motivational strategies by rewarding the learner with externally recognisable incentives, such as achievement indicators (badges, points, levels) and feedback systems (Costello, 2020; Huang et al., 2020).

The project intervention

The vehicle for the third space framing of the project was its gamified and co-creation approach to an intervention, designed and developed with students, staff on academic grades and staff in professional service roles. The intervention was designed to sit outside the formal subject curricula for students and to offer a gamified and digitally based approach to the learning environment, encouraging the development of transferable and employability skills. It was designed to have a cross-disciplinary relevance, but it was delivered in one school at a London-based university in the first instance. As it was first launched during the Covid-19 pandemic, the digital delivery proved particularly appropriate. Through self-elected engagement, the intervention allowed for the recognition of students' development outside formal curricula boundaries in a playful and active online environment. Students engaged in activities, such as developing their CV, building digital skills, participating in university and community life activities, referred to as 'Missions' – a name allocated by the student team – and they claimed badges, which contributed to the award of a 'Passport'. This Passport is included in their Higher Education Achievement Report (HEAR), and top scorers are also awarded prizes. These activities,

while important to the development of a graduate profile and future career success, are not generally recognised within a 'normal' degree award. The engagement with Missions in the intervention can therefore be seen as a third space pedagogic activity, in terms of both its approach and its application, as students move across academic boundaries and develop a range of different skills outside subject and discipline boundaries. The intervention, then, is a third space activity on three levels: (1) in terms of its design; (2) through its development; and (3) in what is achieved by students' engagement with it. The students engaged in co-design ideation discussions; then, the core co-design student team was tasked with the implementation of the ideation plan, and with the development of the interactive artefact.

The intervention was rolled out across a whole school at the university from 2019 to 2023. The engagement rate is exemplified for the academic year 2022/3, when 4,772 badges were awarded to students for the Missions they undertook. In 2022, 67 Passport awards were made, which were recognised on the students' HEAR.

Methods

The data included in this article represent a small subsection of the overall data collected. The project strand reported here focuses on evaluating third space activity on the three levels mentioned above. The aims were to analyse the mutuality and relational aspects of the innovative pedagogic intervention designed within a third space approach, the development of transferable skills and agentic development in the third space and the dialogic experience for participants.

The data-gathering phase for the wider research aspect of the project took place over a period of three years (2020–3), using a mixed methods approach which included focus group interviews and individual interviews conducted online, as well as in-person with staff and students. Data were also collected during the design and production phase of the project, which was based on a participatory design approach and included co-design workshops with students. In this context, data collection took place via co-design workshop observations and usability focus groups. Six focus groups were held to collect data on the student experience of the intervention, with three to five participants in each, with undergraduate students in the School of Business in a London-based higher education institution. These were based on a self-selected sampling approach. Two co-creation workshops took place with undergraduate students in London, and two with students taking a postgraduate course at a partner institution in France. This was to understand more about such activity in international learning spaces, as some of the Missions developed had a focus on building cultural awareness skills. The evaluation phase was also conducted in partnership with student co-researchers (Schubotz, 2019). Interviews focusing on the third space aspect of the project were conducted with the two core student co-designers from the London institution, the two core academic staff leading the project at the London institution, and the Virtual Learning Environment Manager and the Head of Work Based Learning, Policy and Practice in the London institution. Table 1 provides a breakdown of the co-creation workshops, focus groups and interviews.

Table 1. Focus group and interviews breakdown

	Study level of students	Type and time of focus group	Number and cultural background
Focus Group Interview 1	1st year of study	2020 interview, led by staff, held online	5 students (1 international)
Focus Group Interview 2	1st year of study	2021 interview, led by staff, held online	4 students (diverse British group)
Focus Group Interview 3	2nd year of study	2020 interview, led by staff, held online	4 students (diverse British group)
Focus Group Interview 4	2nd year of study	2021 interview, led by staff	3 students (diverse British group)
Focus Group Interview 5	3rd year of study	2020 interview, led by staff, held online	3 students (2 Brazilian, 1 Spanish)
Focus Group Interview 6	Focus Group interview	2022 interview, led by students	4 students (2 Americans, 1 British, 1 Spanish)

Co-design Workshop 1	Mix of business students	2022, led by students	3 students (2 Americans, 1 British)
Co-design Workshop 2	Mix of business students	2023, led by students	3 students (1 Italian, 1 Spanish, 1 British)
Co-design Workshop 3, London, in person and online	Postgraduate students	2023 Co-design in London, led by staff	19 students (8 French, 1 American in London, 10 French online)
Co-design Workshop 4, France	Postgraduate students	2023 Co-design in France, led by staff	17 students (10 French, 2 Italian, 2 American, 2 Canadian, 1 Finnish)
Co-design student interview	Postgraduate	2023	Nepal
Co-design student interview	Undergraduate	2023	British
Project team Professional Services Department staff 1	n/a	2023	British
Project team Professional Services Department staff 2	n/a	2023	Indian British
Project team Professional Services Department staff 3, Virtual Learning Environment Manager	n/a	2023	South African
Project team academic staff 1	n/a	2023	Italian
Project team academic staff 2	n/a	2023	British

Data, video and audio files from the interviews, participant observations and focus groups were analysed using a reflexive approach to thematic analysis, as defined by Braun and Clarke (2021). The project received institutional research ethics approval, and it complied with the British Educational Research Association (BERA) ethical guidelines, and with General Data Protection Regulations (GDPR) legislation.

Findings

The findings from the focus groups, observations and interviews with staff and students were framed through the themes generated from the literature and data, and they represent the building blocks of the relational and dialogic elements of the model of co-design interventions. The overarching themes of mutuality and relationality of the co-design space, the development of transferable skills and the third space and the learning environment framed our analysis of the data. The themes highlight the overarching explicit and implicit meanings and realities in relation to participants' co-creation activities, and their reflections on their experiences of the project.

Mutuality and relationships with academics, professional staff and student co-designers

The advantages of student partnership and student involvement is that it allows for more fluid interactions and for innovation as a driver. This might be viewed as critical in building an innovative pedagogic intervention. The co-design space places more emphasis on the dialogic and relational, and on the establishment of trust and mutuality, through bringing in the student perspective to enhance the learning environment. This appreciation of the student involvement, and the strengths that it offered the project, was a central feature of interviews with both staff and students. The excerpt below provides an example of the student view on the importance of this context of mutuality. The participant acknowledges that effective teaching requires the student to inform the tutor on what works well, and that the relationship should be steeped in a frame of mutuality to ensure an effective learning environment:

> Now, sometimes the people that are teaching the teachers are the students … But, at the same time, you also need the feedback. You also need us to tell you what we do like and don't like, otherwise it's not going to work. It is a two-way street. (Student J, London institution)

The flipping of traditional relationships is hinted at here, and it is presented as a strength. Similarly, the excerpt below reinforces the strengths of student involvement in the learning environment:

> I think it's super beneficial to have students to help create the message in which they learn, just because I think … I've benefited a lot from … student tutors or … student help a lot, just because I feel like they're more … familiar with the way that I think versus … hearing from a teacher who's been teaching the same thing for … a long time … And I feel … I think for students, it helps a lot to … give their feedback to professors. (Focus Group 4, Student 1, London institution)

Critically, the importance of the relational is underlined. Observational data from co-design workshops supports this relational context. The relational aspect of such workshops was observed at every juncture, and it was key in both the UK and the overseas environment, building a sense of community and trust, as has been observed by Lubicz-Nawrocka and Bovill (2023).

The concept of relationality in the innovative pedagogic space feeds into framing such activity within a context of mutuality. This is summed up by a student through a notion of building something together: 'I prefer to be in group and interact with other people and teachers to build something together' (Focus Group 6, Student 4, London institution).

Staff perspectives on the development of skills for both staff and students provide further insights into the importance of understanding the mutuality of this developmental space, and working together to resolve the challenges, as this excerpt highlights:

> … there's definitely something to be learned of what to avoid as well because … with it not being defined in any of our systems, we had to create and make up how students and staff … to some degree arrive on the module, and how that is being set up … So that was … interesting. First round if you want of what we've done … if we are looking at running things like that, there might need to be a little bit of thinking being done of how that can be better reflected in existing university systems. (Professional Services Staff 3, Virtual Learning Environment Manager, London institution)

The mutuality of the approach is illustrated, as well as the flexibility and the challenges to normative roles and the use of systems. The underlining of the creative space is also central, and it is threaded throughout this comment. This links to the development of agency, and to the building of trust between staff and students that is facilitated through the removal of boundaries and more traditional approaches. Creative solutions are used that are able to meet the demands of students, and react to the feedback they have provided, such as the use of a more gamified approach to the intervention. This stretched the Virtual Learning Environment to its capacity.

Transferrable skills, agentic development and the third space

The theme of transferable skills is a broad umbrella that allows for an analysis of third space activity. This applies to both staff engagement and student development, and it cannot be seen solely as a label for the student learning environment. The excerpt below allows insights into the boundary crossing of a professional services member of staff. There is an acknowledgement of the separation of traditional roles, of the skill sets that might be involved in crossing boundaries, and of the benefits of understanding different ways of working:

> I can sit between both camps because I've got the academic experience and the way of talking in an academic way and understanding the way that the university runs from the perspective of what's needed for a validation to create a module. (Professional Services Staff 1, Head of Work Based Learning, London institution)

Similarly, the students involved in the project development identified the building of new skills outside traditional subject boundaries, and the need for the shifting of perspectives to cross boundaries which are reliant on the development of new skills:

> With doing this, I have built so much skills within myself. Being creative is one thing, but when you're put into a challenge, and you have to use that to build something, it really exercises every skill you have. So, in that way I think I have built a lot of skills which will help me in my career. (Student P, London institution)

This student acknowledges that this skills growth will facilitate future employment in a way that the use of traditional subject knowledge would not. It also allows us to witness the possibilities for agentic development as a result of their collaboration. This collaboration and communication flow was further observed as the dialogic aspect of this third space project. The excerpt below underlines the importance of learning outside traditional spaces from a student perspective, and the importance of active participation:

> I really find that really fascinating, because the whole point of being human is not what you learn in the university, but what you can learn extra by doing things … And I love learning by doing things. So, in my opinion it's really great. They [the student co-designer] especially was mentioning that if you complete the Passport … you can add that as a badge on your CV. And I was asking, can we, is there a way that you can create an electronic badge so you can add it? So, for example, Microsoft has this electronic badge they give when you have completed that course. So, I was thinking, is that something that you can put on your CV or, like, have it as a badge and you can wear it around and things like that? So, I really like the idea of having certain activities. So, you can have students engage. (Focus Group 3 Student 3, London institution)

As a consequence of the challenges that needed to be overcome in deploying the project to the student body, technology skills were developed by the whole project team, through participation in such activities as identifying the best way to engage with and use the virtual learning environment tools to implement the gamified elements, the ways in which the Missions could be presented that would be effective and meaningful to users and the best approaches to automate the assessment of students' input through minimising the need for human intervention in the rewarding of participation in the Missions. Various approaches were tried and tested for the delivery of Missions. There was work with student co-designers; for example, weekly meetings were held to develop the software platform for viable use, and to develop the terminology and construct the Missions, so that they would be attractive and clear for the users. The team also explored alternative gamification platforms and procedures for badge awarding, acquiring a wider knowledge of the market for gamification tools and technologies. All the team members developed new skills in e-learning interaction design, participation design and research methodologies and, overall, in intergenerational, multilayered and multifunctional teamwork.

The dialogic experience: co-researchers and co-designers

The third space allows us to view the collaboration with students and colleagues in professional services as a conversation that produces outcomes for all involved. The data evidenced the dialogic space of the project. We gained insights into the way in which the dialogue evolves through project development, and the ways in which such a space is dependent on the construction of a democratic space which allows for a flow of dialogue. The benefits of that dialogic space are acknowledged in the excerpt below by one of the students acting as a co-designer, where the flow of dialogue is framed as a rewarding element of the construct:

> It was really nice to see, to be involved in the process of collecting feedback and collecting inputs from students and again presenting them, because this is something we built ourselves, and being able to present it to people and receive their immediate reactions to it. It sort of gives a rewarding feel to what I have been doing. (Student P, Co-designer, London institution)

The student goes further in acknowledging the importance of the dialogue with the end users of the product, acting not just as a student, but also as a leader in the design process:

> I think the involvement of students has been very important to the creation of the whole thing. As a digital design student myself, we have a lot of emphasis on user experience in design these days. So, in this scenario, the users are students. So, when we directly interacted with them [student co-designers named], we got to know what they really wanted and what they really enjoyed. (Student P, Co-designer, London institution)

The recognition of the students in this collaborative space was an aspect of the data that was acknowledged by others in terms of their participation and contribution, which was also acknowledged to be outside traditional approaches:

> Yeah, for me, with … my experience here, I don't have this opportunity to be involved in, I mean, the construction … the class of the material. So, it's, for me a great opportunity to be able to be to be involved. (Focus Group 6, Student 2, London institution)

Again, the importance of the collaboration and the dialogue in learning spaces is acknowledged by students. This is further exemplified in the excerpt below, where democratic spaces underpin the development of transferable skills and interactions in the learning environment, and build criticality in action:

> I learned way more than the other classes because when I listen to someone, then you also don't really remember everything because we're not always focused. And it also helps us to think more also [about] things I wouldn't think about, and I think it also made us learn more, so, like, if we go create this thing, I think we will learn stuff about it. And then we'll have better ideas because we all together, co-create … (Focus Group 6, Student 3, London institution)

It was also clear from the focus groups that the ways in which relationships are built is critical to the process. Time has to be given to the building of those relationships, both between students and staff, and between students and students, for a true dialogic encounter to occur. The challenges for building such relationships are recognised in this excerpt: 'I think at first, it's a bit confusing. Like you don't know what to say. You're also scared, scared to say, mistakes and something wrong. But after a few weeks, you get used to it' (Focus Group 4, Student 4, London institution). This important element of the development of relationships was echoed in similar ways by others, both staff and students, and the dialogical frame is symbiotic with the third space concept.

Third spaces and the learning environment

We have suggested that innovative pedagogic spaces can be viewed in the context of the third space, and that such innovation allows for an enhancement of the higher education learning environment. This position does not challenge or undermine existing pedagogic approaches, but rather engages once again with the notion of pushing boundaries and building the types of skills that allow for criticality in action for graduating students. The expanded learning environment is illustrated by a comment from one of the co-design students: 'I have learned things from P of how she's been able to do all the digital media side of things, and I'm hoping that she's been able to take some skills from what I can do as well' (Student J, Co-designer, London institution).

This student of business acknowledges that he has developed digital design skills as a result of his participation in the project, which he would not have learned from his own studies. Additionally, there was recognition that both students learned research skills and built their confidence in ways over and above the expectations of their course, such as participating in an academic conference presentation. This was an achievement that the students acknowledged they would not have had the confidence to undertake prior to their participation in the project.

This confidence was also represented through the development of the sense of belonging and being part of the team, which was cross-departmental and cross-subject. This was particularly important for one of the co-design students, as she was an international student from Nepal. She reflects on the growth of her confidence because of her participation:

> And gradually I felt more sense of belongingness, even with you guys … Of course, it shouldn't be that way. But I don't know. It's something that happens when students come far away from their family. It feels like you're differentiated by some sort of, I don't know. There's sort of ice between. And that gradually broke. And I could become myself. And I felt more confident in what I was doing. And obviously this was a new challenge for me as well. I have not done this. (Student P, Co-designer, London institution)

The importance of the relationship and the dialogue between the participating actors is acknowledged as having an overarching importance in the development of a successful third space project. The dependence on personality, and the motivations of participating individuals, was made reference to: 'So, this has been run based on personality and drawing people in, rather than on available resource' (Professional Services Staff 2, Virtual Learning Environment Manager, London institution). This comment reinforces the relational and personal dimensions in a third space project, such as the project described

here. However, there is also a note of caution, as flexibility and 'thinking outside the box' and normative parameters may represent a restrictive element for both setting up and participation in such third space activity. This also applies to recognising the different backgrounds of those who may come to such a project, who have differing perspectives and priorities. It is important to acknowledge that the coherence of the third space as a space in the learning environment is sufficiently flexible to allow for these differences.

Reflections

The research findings from this project underline the possibilities offered by the third space dimension in the higher education learning environment. They feed into the model of the pedagogicised university referred to by Nixon (2012). The notion of boundary crossing allows for activities beyond traditional roles and traditional subject boundaries, which have the potential to enhance pedagogic reach and impact, breaching the normative and building universities that are fully pedagogicised. Place and space were witnessed to take on new dimensions that were not bounded to traditional subject delivery spaces, and which were relational in nature. The gamified context offered further inspiration, and brought in new ways of thinking and being.

The project outlined consists of layers of third space activity: in terms of its design, which used a participatory design approach; through its development with students as co-creators; and in what has been achieved by the engagement of staff and students. The third space dimension of the learning environment is represented in a visual format in Figure 1.

Figure 1. Third space dimension of the project

The model in Figure 1 visualises the potential third space dimension of the learning environment, allowing us to understand the fluidity of the space and the boundary crossing that can be achieved, enhancing pedagogic reach in the process. It recognises the possibilities for new forms of knowledge creation that may result. This was evidenced in several ways, for example, the engagement with the co-design approach, which provided a transformative experience, not just for participating students, but also for academic and professional services staff, by embedding a dialogic encounter. The academic and professional actors were able to exploit their expertise in enhancing the learning environment, as well as building a strong sense of belonging and connectedness to those participating in the project. In addition, the involvement of those from professional service roles allowed for interaction in a deeper way with student participants than would normally be the case. Reward in the form of job satisfaction was therefore an unexpected consequence. While the project had originated with an aim of fostering enhanced engagement for students, the outcomes have been more far reaching for all those involved, allowing for a building of a strong sense of belonging and affiliation to the university community.

Through its focus on participation, the academic project team expanded their perspectives with regard to who might be involved in the development and the delivery of such a project. This furthered the impact of the project, for example, the international reach as a pedagogic project, and also the impact in terms of understanding the framing of the project as a third space initiative. This was further exemplified through understanding that this third space approach was not static in terms of the involvement of the actors, but allowed for continual refinement of the participation of those actors in advancing the planning-design, development-implementation, and the testing of the feedback loop. An additional aspect of this approach, which was evidenced in the observation and focus group data, was the dedication of all participants, as well as the unexpected and fascinating insights that all participants brought with them.

The participants also expressed an emotional outcome of their involvement in the project through their attachment to the project mascot, a caricature called Max, which embedded a gamified look and feel to the intervention. The role of game characters is recognised in game design theory (Isbister, 2018). However, the power of a character to connect with participants as a tool in the academic gamified experience was unexpected. Students requested that further fun aspects be developed, and evidence was offered through the discussion time that was given to the types of approaches that could be employed in co-design workshops. The evaluation demonstrated the demand for the further development of the narrative around the Max caricature, and for a more extensive use of the character. The possibility of having merchandise to keep as a memento, and connection with the university and the project involvement, both in terms of design contributions and as end users, provided further evidence of the connection and attachment. This finding reinforces the importance of the third space in pedagogic terms, and the relational and dialogic space that the third space of this project provided. Students further expressed a desire to be involved in the dissemination of the project findings, participating in conference presentations, as well as in the further evaluation of the project.

While the project has been successful in terms of offering educators the possibility for a new pedagogic paradigm, providing an example of criticality in action, which builds agency and relevant skills development outside the normative bounds of traditional subject areas, there are acknowledged limitations, both for participatory design and for third space research projects. These include the reliance on a relational dynamic, and thus on individual actors. This is acknowledged as presenting a challenge for the objectivity of the findings, where the focus on building of trust and community in such projects is subject to the positioning of participants at the time of the data collection. The research project, while conducted over a few years, was also limited in its scope, as it was focused on one academic department in one British university, and one course in one French university. So, while this is a large-scale project across one school with international links, it has yet to be scaled up across the university or to other institutions. Furthermore, the focus groups were based on self-selected sampling. However, despite these recognised limitations, the glimpse into the way in which a project can operate with participation from professional services staff, academic staff and students provides us with some invaluable insights, which outweigh the challenges presented. There remains, as Whitchurch (2023) acknowledges, a lack of recognition within university resources and structures both of the work undertaken by those involved in such third space projects, and also of the importance of Mode 3 in-practice knowledge. This limitation of recognition was evidenced at various stages of the project, and it creates a potential tension in the context of mutuality, on which the third space learning environment is dependent. Additionally, such projects might be seen as having a dependence on participating actors' motivation and ability to

promote impact and outcomes. While motivation was a positive contributing factor to the success of the project, the dependence on motivation may also be seen as a limiting factor. We consider that these key aspects of dependence require further exploration from the perspective of third space projects with students, in order to understand the implications of possible scalability, while maintaining the elements of flexibility that might be viewed as critical to the creative spaces in which they exist.

Conclusion

This project evaluated third space activity on three levels: (1) in terms of co-design; (2) through its development process; and (3) in what is achieved by participants' engagement with it. The third space framing of a co-creation digital intervention was critical to our understanding of the student experience of informal learning spaces and dependence on the mutuality and relational aspects of this third space. The project highlights how boundary crossing can lead to an enrichment of the learning experiences for participating students, enhancing future employment prospects and the development of transferable skills. Participating staff equally found their involvement and working across boundaries to be a rewarding experience. This was expressed in terms of the mutual learning, as well as the enhanced relationships with students. The intervention helped in building student confidence, and recognised students' contributions to their own learning development. This appeared particularly important for the culturally diverse groups of students who were part of this project. Additionally, we saw that traditional educational roles for staff and students around transitions, partnership, community and professional practice were flipped. This flipping of roles added an unexpected dimension that further underlined the importance of understanding third spaces in higher education.

Declarations and conflicts of interest

Research ethics statement

The authors declare that research ethics approval for this article was provided by London Metropolitan University ethics board.

Consent for publication statement

The authors declare that research participants' informed consent to publication of findings – including photos, videos and any personal or identifiable information – was secured prior to publication.

Conflicts of interest statement

The authors declare no conflicts of interest with this work. All efforts to sufficiently anonymise the authors during peer review of this article have been made. The authors declare no further conflicts with this article.

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