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Place, space and object-oriented learning methods within the Library: using ghosts and monsters to create safe spaces for learning.

Jennifer Paton

Information Services, Library & Learning Services, York St John University, York, UK

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ABSTRACT

A practical reflection of the impact of Escape Room-style games, both physical and digital, on the way HE students experience the Library. These are examined through the lens of place-oriented learning and digital learning theories, with a particular focus on accessibility and the inclusion of historically excluded groups.

We focus on two escape room-style events, one physical and one digital, developed by frontline library staff to support the induction of students in a university library setting. We reflect upon the aims, development and impact of the events.

Preface

Gamifying interventions, or as Kapp phrases them, Interactive Learning Events (ILEs) (2014, p. 2), have been gaining traction as part of informal learning pedagogy in the Gallery, Library, Arts and Museum (GLAM) sector since the early 2010s, as well as in more formal learning contexts like higher education (Kapp, 2014, p. 2). As its name suggests, gamifying contextualises the overarching mechanical construction of games – particularly computer gaming – adjacent to the development and learning of skills or processes, to highlight how game-like behaviours can be employed to encourage engagement in learning (Gee, 2003). Gamification, as a distinct subset of this, exploits the reward systems and teaching behaviours or “gameplay loops” frequent in gaming to engage with the learning process. Gamification, while a possible part of ILEs or gamified structures, does not constitute their whole, with games and gamified learning focusing less on restricted behavioural direction and more on providing a structure through which learning can take place. This said, gamifying and play which, as Marchetti phrases it, ‘is generally understood as a self-determined activity, aimed at the players’ fun’ (Marchetti, 2021, p. 115), do not necessarily always go together, having neither the elements of freedom, independence or necessarily even of being fun as Kapp (2014, p. 15) points out. As such, gamifying, particularly in the higher education space must be approached with nuance and purpose (Kapp, 2014).

While games do not always equal play, and play does not always equal games – being that the inherently structured nature of games do not always lend themselves to play-like behaviours or playfulness especially for those engaged (sometimes unwillingly) in an educational setting, nor does the unstructured sometime chaotic nature of play and the mental state of playfulness or fun while they may integrate learning behaviours, always emulate the repeatability, logic or structure of a game - they provide an excellent resource for introducing out of the classroom, and independent, learning within higher education spaces and elements of both theories can coexist in certain formats. Most recently gamifying in the library space has popularly been engaged with through one of the frameworks which most readily lends itself to this coexistence: the genre of the escape room. Both digitally and physically, escape rooms as modes of learning in higher education have exploded in popularity over the last 5 years (Bilbao-Quintana et.al, 2021; Dugnol-Menendez et. al, 2021; Karageorgiou et. al, 2020; Ross & Bell, 2019; Seebauer et. al, 2020; to name but a few). The term “escape room” itself has been diversified in the process from a strictly singular construction of a narrative-driven, time-restricted, puzzle-based experience contained in a single locked room, to cover a much wider genre:

which does not even necessarily imply an escape plan as the ultimate goal or the very existence of a physical room ...[instead escaping]... in a more metaphorical way: the ignorance of what we are trying to discover is an imaginary space from which we want to escape through achievement and obtaining the answer (Bilbao-Quintana et. al, 2021, p. 4).

In doing so it has retained somewhat the elements which invite participants to play, particularly in its independence, sociality, and the flexibility with which its solutions can be arrived at. Further, the escape room concept allows us not only to embrace gamifying in learning but to incorporate place and object-based learning methods which sit comfortably within the strictures of play as it relates more to the works of Karoff (2013) and others who forefront the mental states of the players and highlight the concepts of playfulness as changing unstructured, fluid, and explorative reactions to stimuli. This presents a unique opportunity to engage with groups that critical place-based learning would express as outside their social location (Langran & Dewitt, 2020, p. 58), but that within the context of the singular institution rather than a whole cityscape, we might better phrase as historically excluded.

“Historically excluded groups” is a term that has recently been gaining traction within the Heritage and Museum sectors. It stems from a selection of broader movements, including the sector-wide thrust towards decolonisation, the critical examination of the role of museums regarding class, and the movement towards queering museums (amongst others), all of which hold relevance both to academia and particularly to libraries who are only now beginning to tackle issues of decolonisation and vocational awe. Historically excluded groups references those groups that have been previously institutionally erased, ignored, or ‘excluded from full rights, privileges and opportunities in a society or organization’ (Diversity Officer Magazine, n.d.). This nomenclature removes the onus of othering from those excluded, placing instead the weight of blame on those organisations who have

historical participated or been complicit in their implicit and explicit removal from the space, in a way which terms like BAME (Black, Asian, Minority Ethnic), BIPOC (Black, Indigenous and People of Colour), or LGBTQ+ (Lesbian, Gay, Bisexual, Transgender, Queer +) do not. This term also gives us space to included further intersectionalities of these identities and experiences, such as class, neurodiversity and disability, when considering those excluded from institutions like museums or higher education, and to tailor our understanding of the particular usage of the term to the transgressions of our institutions.

This paper will examine two escape room-based learning events, one forerunning digital intervention and a subsequent physical intervention made by a team including the author, created by front-line library staff at York St John University Library. We will look at the development of these events in terms of critical place and object-based learning theories and the impact they had on students' relationships with the Library. The fundamental argument of this article will posit that the digital escape room provides a low-pressure, low-impact learning environment advantageous to neurodiverse students. While complementing the digital, the physical escape room by the nature of its format combines an explicit invitation, clear behavioural cues, and repetitive self-led learning behaviours with light touch supervision and peer reinforcement within a play-based context (Karoff, 2013), which benefits those from historically excluded backgrounds.

The teams

The teams which developed both rooms were primarily members of the Library's user-facing Information Adviser team. While not engaged in the traditionally pedagogical role of the academic Librarian, these staff brought a broad range of transferable experience to bear on the development of these interventions (including expertise in digital learning development, accessibility, board-gaming and museum learning) as well as a detailed and intimate understanding of the day-to-day way in which students encounter and engage with the Library. This diversity of experience entering the development process, and familiarity with the point of interaction experience of students, created a valuable counterpoint with which to approach the project as it was proposed by the organisation. The team was able to contrast the expressed aims of the project – what we want students to know – with what we knew students needed to know, as discussed in more detail later in this paper.

Historical Exclusion, Vocational Awe and Threshold Fear

Vocational awe, to quote Fobazi Ettarh, 'describes the set of ideas, values, and assumptions librarians have about themselves and the profession that result in notions that libraries as institutions are inherently good, sacred notions, and therefore beyond critique' (2018). Libraries are, to extend the assertion, welcoming spaces for everyone, inherently so. And, though pains have been taken to begin including those with accessibility needs through accessibility services like the RNIB Bookshare scheme, the process of vocational awe, especially in academia has meant that those historically excluded for other reasons have remained so, not actively but passively. The sense that professional virtue and acceptance encapsulated by vocational awe – that libraries are good and welcoming places and therefore do in practice welcome and are accessible to everybody – is a vicious

fallacy propagated from the place of that privilege. Libraries, particularly academic libraries welcome those, primarily, already engaged within the social location of academia. Those from historically excluded groups, who do not necessarily possess the context by which to participate fully in the space of the academic library, are inherently disadvantaged and ultimately excluded by the rhetoric of the welcoming library (see studies like Elteto et. al., 2008) and its subsequent failure to explain its space or offer instructions to its way of working. After all, if libraries are good and welcoming, everyone must know how to use them right?

Many parallels can be drawn between museums and libraries in this context and a valuable counterpoint to the sense of the inherent worthiness and inclusion of the library is to be found in museum theorist Elaine Heumann Gurian's Threshold Fear:

there are both physical and programmatic barriers that make it difficult for the uninitiated to experience the museum. The term "Threshold Fear", was once relegated to the field of psychology but is now used in a broader context to mean the constraints people feel that prevent them from participating in activities meant for them. (Heumann Gurian, 2005, p. 115)

While Fobazi Ettarh (2018) compares the library to a sanctuary or monastic space, both notably of restricted access, museums studies has long acknowledged its architectural and philosophical relation to a classical temple. These thresholds are intimidating. Museums invite worshippers in through imposingly columned frontages with every expectation of creating their appropriate behaviours within with the inherent threat of othering those who do not conform. The museum body, the enforcement of socio-cultural normativity through the museum, has been a case of study for some time (Leahy, 2012). The inherent enforcement of behavioural standards and re-enforcement of class barriers built from the knowing and not knowing of how to comport oneself in a given space is however not unique to that model. Libraries demand behavioural norms and if libraries, particularly in the highly specialised environment of academic libraries, do not openly and clearly signpost those behaviours they are actively excluding those users who do not fit into the vanishingly small category of those who already possess academic library bodies.

Heumann Gurian posits that fundamentally inclusion is a function of spatial communication, in how we make spaces that welcome and work for people by providing both the concrete information and the neutral space for new users to learn how they function (Heumann Gurian, 2005). Until very recently this is something museums, like libraries, have not done.

This is an issue that critical place-based learning theory tackles head-on: 'the design of place-based inquiry should take into account critical assumptions about the places in which students learn as well as their previous experiences in similar locations' (Langran & Dewitt, 2020, p. 56). Those with no previous experience in similar locations, those from groups that have been historically excluded from them, are put at an immediate disadvantage when expected to engage with these spaces independently without a critical learning scaffold. Such as that provided by appropriately constructed induction-based learning.

Critical Place-Based Learning

To borrow Langran & Dewitt's tagline: '[p]lace is more than where you go, it's also why you're there' (2020, p. 1). Place-based learning theory embraces a process of immersive, scaffolded independent development, wherein students seek to understand and engage with geographic and sociological learning through their observation and experience of a particular place. At its heart place-based learning centres on the 'actual process of exploration [which] enables students to establish connections with a site, developing a sense of place' (Langran & Dewitt, 2020, p2). This approach puts students into the middle of geographic and social spaces and encourages them to participate in the process of mapping, analysing and therefore understanding them; and, inversely, in critical place-based learning to take maps of spaces and communities and to deconstruct them, building dimensionality into their understanding of space and engaging their understanding of how mapping introduces biases and simplifies the inherent complexity of spaces (Langran & Dewitt, 2020).

Similarly, the critical element of the theory demands 'educators note that social, political, and economic factors privilege the experience of some students, while increasing the number of challenges that are experienced by others' (Langran & Dewitt, 2020, p. 41) impacting how they experience, and come to understand that place.

As Smith phrases it, place-based learning can provide an 'induction into community processes' (2002, p. 591) which, though he uses examples of students leveraging information gathered through place-based learning to become active participants of the socio-political world of their communities, remains relevant to the goal of inducting students into the library. Mirroring Smith, we can think of students engaging in place-based learning in the library, benefiting not only from their niche understanding of that particular and specific place but in terms of how they can become active in a wider academic context participating more deeply and comfortably by drawing on their experience of these community processes and spaces. Place-based learning is the 'transfer of learning from an abstract discussion to a concrete exploration with "real" world connections' (Langran & Dewitt, 2020, p. 2). Those connections reach not only the wider learning community in which the student is involved, but by developing their sense of and connection to place in the library and emphasising their transferable experiences, benefits them when engaging with similar spaces, for different reasons, beyond the library doors. Where Smith's (2002) students were able to exploit their place-based learning outcomes to enfranchise themselves and exert influence within their communities, critical place-based learning within the library space can allow students to develop skills and a level of fundamental comfort within the institution which they can leverage within their academic development.

These are exactly the terms we look to address when combating threshold fear and engaging with historically excluded groups.

Object-Orientated Learning

Though the library today is more than ever part of an online behemoth of digital content and databases, which are arguably objects, or spaces, in their own right (Gee, 2017), physical resources are still an integral part of what it offers. Object-oriented learning foregrounds the haptic elements of learning and encourages the querying of objects based on their close observation and the physicality of their experience to create a sense of connection and understanding of the objects' use and history (Latham, 2013). In object-oriented learning, objects are positioned as 'potential mediators of learning because they can mediate global phenomena from different perspectives, and can offer opportunities to make connections between one's own ideas, thoughts, and experiences' (Vartiainen & Enkenberg, 2013, p. 843). In many ways object-oriented learning, on a theory level, echoes the pedagogy of both play and critical place-based learning, espousing 'collaboration, creativity, and problem-solving, and ... dealing with uncertainty, change, and intelligence distributed across cultures, disciplines, and tools' (Vartiainen & Enkenberg, 2013, p. 842) in much the same way.

Beyond this, though it is far more frequently expressed within the context of the museum object by virtue of its age and uniqueness, the numinous experience of objects is deeply relevant to library-based learning. Distanced somewhat from its religious connotations, though not perhaps that far in the vocational space of the library, the numinous in object terms invokes a 'visceral or emotional response' (Latham, 2013, p. 4). Common aphorisms such as, I love that old book smell, I love the feeling of turning a page and many more, might suggest the library is a place inherently linked to the numinousness of its objects. This aspect of object-oriented learning views the library or rather its objects not solely in terms of questions like: how does the Dewey decimal system work? Is the disc there? Where does this book go? But also more abstractly: who used this book before me? What can it tell me? What was the person who wrote these notes studying? How do I relate to them? Object-oriented education is built on 'trans-disciplinary activities to prepare students for meaningful and productive lives in just such a world' (Vartiainen & Enkenberg, 2013, p. 842), both finding a book practically in the moment and adding that practice to the tools they can use across their lives.

Escape Room

The escape room as a design system, despite the variety and flexibility of its central premise and practical execution, is a fundamentally formulaic construction and frequently features many if not all the hallmarks of its genre. Bilbao-Quintana et al. (2021, p. 5) describe the key elements of the form as:

- Suggestive environment: normally thematic, with a setting that not only fulfils the function of containing the necessary elements for the resolution of the problem, but also supports it.
- Puzzles with varying degrees of difficulty: usually in increasing order, in order to maintain motivation throughout the process.
- Race against time: the fact of having a limited time implies, in addition to a challenge component that affects motivation, the need to carry out adequate time management.
- Teamwork: related to the previous point, having a limited amount of time to solve the challenges forces

the participants to divide the tasks to be solved, so that each and every one of them contributes to the final success or failure.

- Clues: the resolution of problems is derived from the sum and interpretation of various clues.
- Argument and history: the existence of a motivating and coherent narrative gives a sense of unity to the process.
- Main game and secondary games: in this sense, it is usually customary for the main plot to be complemented by a series of secondary plots or secondary problems to solve, with their own entity, but immersed in the general narrative.
- Misplaced objects: this is usually one of the most traditional resources when presenting the clues or the information required to solve the most immediate problem.
- Use of patterns, symbols, codes, etc.: the use of alternative forms of communication puts into operation cognitive processes related to information coding.

The escape room in this format fosters aspects of all of the above learning theories. It provides structured, purposeful access to a space with a sense of place, which intrinsically invites students to ‘read the world’ (Langran & Dewitt, 2020, p. 103) – critical place-based learning. It provides a base from which students can engage with that world, allowing them to develop affinity spaces within the gameplay area, and chart routes between those spaces (Gee, 2017) and from which they can enter the space on their own terms, observe, and identify ‘regulars’ (Heumann Gurian, 2005, p. 119), primarily staff, but also other users, who model expected behaviours and generate safe spaces within the library. It provides free, unmanaged and unsupervised (Marchetti, 2021, p. 124) engagement with tailored learning objects, designed to both elicit a, possibly simulated in the case of props, numinous response, and to have clear didactic learning properties. Which very much places them in the ‘toys’ realm of play-based learning (Karoff, 2013), and overall serves to highlight the intersectionality of the escape room with the values of independence, problem-solving, and creativity.

It also brings valuable aspects of its own. The relevance of teaching seeking and investigating behaviours within an academic library setting should not be overlooked; through its narrative structure and game design, the escape room format encourages not just hard skills like finding a book or using the Dewey decimal system but presents participants with a range of tools with which they can approach more abstract problems (what book do I want?). The narrative nature of the escape room genre drives directed play like behaviours, simulating almost the playground, or a sandbox video game, giving participants the tools or toys with which they can engage with the world to generate and test their own hypothesises based on the outcomes of their interactions (Gee, 2003).

Digital Escape Room – Knowitalls

The digital Knowitalls escape room serves the role of a permanent intervention into the learning space of the Library. It is a self-led ongoing online resource, aimed at engaging students with the wider digital facilities of the Library and their overall learning journey, and particularly provides benefits for neurodiverse students and students with low digital literacy.

Knowitalls was developed during the lockdown in 2020, in the context of a great amount of uncertainty about how students would be able to access the Library and interact with its facilities in person. The focus was on engaging students with the digital library and its objects and providing a simulated physical experience that would allow them to get to know the campus and local area.

Embracing the wider definition of the escape room the development team, led by Cathryn Bell, chose to create a narrative where students received a call to action to help rescue the Library from the Knowitalls, cute knowledge eating monsters that were consuming everything. This came about as part of discussions in the development phase, wanting first to foreground the Library as somewhere students wanted to be, not to escape from. Secondly, fitting with Heumann Gurian's (2005) use of the concept of the regular as staff members or frequent visitors representing safe spaces for new visitors, to remove a proposed element of rescuing a lost Librarian from some Library monsters – which would have implied not only that Library staff were incapable, but also that the space was not safe even for regulars.

Subverting the genre instead to be a trip to the Library, Knowitalls embraces Gee's (2017) ideas of affinity spaces and routes, and follows a place-based learning model in its pedagogical constructions:

When we embark on a trip, we usually have a destination in mind. If we use technological assistance to navigate our journey, the first thing we need to enter in the GPS or mobile app is where we want to go. Only then can the application suggest the best way to reach our destination. Starting with this end goal in mind helps us effectively plan learning experiences as well. Before we think of the activities of what students will do as part of a class, we should first identify what we want them to be able to do at the end of the class (Langran & Dewitt, 2020, p. 64).

Working in this way the developers decide to simulate the learning journey of students through key moments of their academic experience – writing their first essay, finding a resource, referencing and so forth – while addressing frequently asked questions that the front-line team experienced at the time.

Beginning with the first hybrid physical/digital affinity space the game places students in their dorm room writing an essay, when the Knowitalls attack, eating their words. This leads participants to a simulated troubleshooting experience which highlights digital Library objects, such as Office 365 services, and the processes available to them through the Library such as password resets, before re-engaging with simulated physical affinity space (Gee, 2017) and mapping behaviours (Langran & Dewitt, 2020) – getting to the Library. This external spatial understanding of the campus and Library area is a significant element in how this ILE serves to benefit neurodiverse students and, in the context of its development, students who were unfamiliar

with the campus. Creating a clear step-by-step representation of a journey to the Library, both physically and in terms of the order of actions, needs and requirements of access prior to the students' arrival, benefits students who are both anxious, do not cope well with change or sudden barriers to their actions, and who need support meeting requirements like making space bookings. In fact, reflecting the purpose of Accessibility Guides and AccessAble services, the digital escape room creates a scaffolded conceptual exploration of the space. It focuses on usage and available services which all allow students before entering the building to engage in critical place-based analysis of their surrounding, and engage with the expected functioning behaviours within. By teaching students to perform the digital Library as an action on their own time and with functional as well as conceptual accessibility built into its design, Knowitalls enables students to approach the Library with confidence.

Physical Escape Room - The Spectre of Villainy

Overview

In developing the physical escape room, we were conscious of the groundwork laid by the Knowitalls and chose deliberately to focus on other aspects of accessibility and inclusion in our design. We chose to develop the experience to explicitly invite participants, highlight and signpost behavioural and functional norms, and through play to confer the power to be in and experience the physical library as place in the sense of critical place-based learning and as an affinity space as Gee uses the term (2003, 2017). This process of development engaged fundamentally with the idea of threshold fear and aimed expressly to engage with students from historically excluded groups, and those who, also due to COVID-19, had not been able to experience the physical Library until their second or third year of study and so carried a similar social location into the space.

Approaching the planning and development process we employed an in action/on action reflective model (Schön, 1991) which complemented the iterative process of our workflow when designing and testing the event and which proved to be very much relevant to assessing the experience of the students who participated.

Planning and Aims

As presented to the development team at the beginning of the project, there was a long list of goals to be incorporated in the event. These can be roughly categorised as:

- Practical skills (borrowing and returning books, finding books, using the Dewey Decimal System).
- Digital competencies (Using the catalogue, contacting the Support Desk, logging in to Library accounts).
- Facility awareness (Law Library, Language Resource Area, Silent working areas, Student Kitchen).

Information channels (social media channels, library website, Service Desk portal).

These were developed by the Customer Service Management team. Upon examination of these aims, however, it was realised by the development team that, similar to the digital team's experience, through their daily interactions with students there were more fundamental aspects of their experience of the Library that needed to be scaffolded before some of these aims could be addressed. It was identified that there were many overlooked, but expected, areas of Library behaviour and knowledge that needed to be incorporated.

In this vein, as part of the development process, the team reached out to the university's Widening Participation

team. This team focuses on supporting students from diverse backgrounds and with particular needs, such as care leavers, asylum-seeking students, commuting students, LGBTQ+ students, BAME students, student carers, etc. – for our purposes students from historically excluded groups. Through discussions with this team, we realised that one of our key aims in developing the escape room was to unpack our expectations and specific Library related language, something which was mirrored in our day to day experiences with students.

As such we added our own categories to the development criteria for the project:

- Behavioural cues (differentiating silent and group spaces).
- Library language (understanding terms like issue/return, reference only, reservation).
- Spatial comfort (generating affinity spaces, establishing seeking behaviours in the stacks).

Place-based learning often, for good reason, interprets everything conceptually as in terms of a map. In this case the primary destination of our journey was to arrive at a place where students felt safe, comfortable, and confident in the library. On the journey from here to there, there were many more specific goals: knowing how to log in to services, borrow a book, know what was on offer to them. But all, we realised, were predicated on being able to comfortably engage with the place of the Library.

Our first challenge was therefore to create a sense of place that was also commensurate with Bilbao-Quintana et al's first key element of the escape room: '[s]uggestive environment' (2021, p5). While the setting broadly had to be York St John University Fountains Library, discovering a theme which would create a gameplay world in which the problems of learning library skills could be posed and solved beyond the somewhat too true to life "you are a student doing research" was a challenge. Based on an exhibition of materials from partners of the university archive, which was happening in the Library, we posited the theme of an exhibition featuring a York figure, that had somehow gone wrong creating the problems students had to solve. This gave cause for students to be in the Library and a thematic reason for them to engage with elements both already present, and manufactured for the game, which would let them solve the problem of the exhibition, while also engaging in a sense of place.

It also lent itself well to another tenet of the escape room: '[a]rgument and history' (Bilbao-Quintana et al, 2021, p5). In brief, our narrative developed as: the Curator invites students (explicit invitation into the space) to help get the last few things ready for an exhibition on Lancelot Blackburne the pirate Archbishop of York (locating the story firmly within the sense of place of the city), but one of the objects has gone missing and the room where they were preparing the exhibition has been disrupted. Dealing with the missing object the Curator has been called away (giving students independence in the space) and has left them a to-do list (thematic goal). The ghost of Lancelot Blackburne, annoyed that his greatest achievement – stealing Captain Morgan's rum recipe – will not feature in the exhibition, has taken the to-do list (thematic problem). He has used the means at his disposal (the Library) to hide it and the missing object, which contains a letter about his exploits, until players can find and open it using the clues around them (elements for resolution).

The theme of the exhibition, while traditionally engaging with an exclusionary space in its museum-likeness (Heumann Gurian 2005) allowed us to invite students, who might otherwise have not associated themselves

inherently with it, to role-play academia. Using this play to 'enable players to simulate and imagine themselves in an experience related to the target topic, so to engage in collaborative meaning-making, in-depth reflections, and deeper understanding' (Marchetti 2021, p115) enabled them to create a further sense of cultural alignment with the Library and the elements of learning the gameplay seeks to represent (Hammer, 2017). The posing of the ghost of Lancelot Blackburne in mischievous opposition to the curator allowed us to engage with one of the most significant benefits of using an escape room ILE to create library induction outcomes: phrasing each new aspect of Library interaction as a puzzle, negating the demands of the academic library body's suggestion that participants should already know how to perform these functions.

Designing the Room

Our primary focus, having created a narrative structure that included an explicit invitation for students to enter the library and play with the notions of traditionally perceived academic behaviours in the space, was to address our foundational aim of generating spatial comfort. Through engaging with critical place-based learning, and by placing a focus on getting to know the space, traversing it, taking time to understand it, and creating a safe base, or affinity space from which to do so, we aimed to tackle some of the root elements of threshold fear and counter the roots of those elements within the process of historical exclusion. As such, we created a secluded, private space within the Library that would act as a home base (or "quest hub" in video game parlance) to which students would frequently return and in which the first few puzzles could be centred. This created an affinity space over which students could take ownership, and begin to create routes to other developing affinity spaces around the Library as they encountered them (Gee, 2017). This also created a sense of independence and privacy in which team dynamics and roles could be established and flourish outside of the gaze of staff or other library users (Marchetti, 2021).

To help extend the feeling of ownership, or right to be in the wider Library space, created by this initial affinity space students were given clipboards identifying them as Exhibition Assistants. These featured the game's logo, which was displayed prominently in the promotional and in-game materials around the Library. The clipboards functioned as passports to the space which could be taken up and put down as students wished, allowing them both the comfort of having a visible right to participate in the space and the ability to shed that identifier and observe the functioning of the space while engaging with it as a regular user. This enabling of participants to don and shed their unique identity within the space developed as part of the iterative design process in which we engaged. Reflecting on the puzzles as they developed we realised that similar solutions, such as badges, ceased to be passports as students became confident in their usage of the space and could become construed as signifiers of otherness. Developing a literal pick up, put down solution allowed students to meditate their own experience and relationship with the game and the Library.

With a broad theme and central location in place, the challenge was to develop a series of relevant, interlinked, narratively satisfying puzzles, which could naturally switch between the majority online tasks in our original

remit and the more physical foundational elements of learning we had introduced. The didactic manner of these aims fit perfectly with another of Bilbao-Quintana et al.'s characteristics of the escape room: '[m]ain game and secondary games' (2021, p. 5). This leaned into our narrative of opposing curatorial and otherworldly forces. Online and upper remit tasks would be given to students from the curator's to-do list, while foundational and exploration promoting tasks would come from the ghost interfering with the curator's instructions, allowing us to alternate the experiences and consistently engage with different types of learning throughout while serving the overarching directive to find the missing exhibition piece.

The first task that participants were asked to do by the curator when arriving in the Exhibition Preparation space was to tidy up the books and other objects thrown around by the intruder: ('[m]isplaced objects', Bilbao-Quintana et al, 2021, p. 5). The books, facsimiles of early modern sermons and political poems about the Archbishop, were deliberately designed to subvert the notion of the numinous (Lanahan, 2013), their tactility and less than genuine construction making them 'earthly' and handleable despite their historic appearance. These books displayed collection numbers, designed to be light-touch introductions to the Dewey Decimal system, to help students organise them in the right order. In response to testing further scaffolding was added in the form of case diagrams, contents lists and later numbered book stands relating those case diagrams. These were introduced to further guide participants and provide multiple ways of solving the puzzle, to appeal to different learners and improve group participation ('teamwork', Bilbao-Quintana et al, 2020, p. 5). These clues ('the resolution of problems is derived from the sum and interpretation of various clues', Bilbao-Quintana et al, 2021, p5) created multiple pathways to solve the puzzle in hand, and added an element of overt guidance which encouraged students to apply both logical, object-oriented (Vartiainen & Enkenberg, 2013), and environmental cues to their experience (Langran & Dewitt, 2020).

Following this, the remains of a to-do list found in the room asked students to check the Library Twitter to be sure a tweet about the exhibition had been posted ('[p]uzzles with varying degrees of difficulty', Bilbao-Quintana et al, 2021, p5), fulfilling the upper-remit task of introducing students to one of our informational channels. This tweet showed an object conspicuously missing from their exhibition area, showing them what they needed to find and supporting the development of the overall narrative.

Escalating in difficulty, secret writing hidden on the books, if placed in the correct order, would provide a heavily structured set of instructions for participants to undertake their first excursion to other areas of the Library. Though the use of the secret writing itself underwent many changes, primarily due to practical necessities – the ultimate location of the home base being a particularly bright area – the addition of elements like the very scientific Wissenschaft der Geisterjäger UV Examination Booth to the room as part of an in-action reflection provided a compelling piece of secondary object-based guidance to participants and made it one of the most consistently solved puzzles. Reflecting on this element afterwards with participants they almost universally had been able to copy down and follow the instructions given with great accuracy. These instructions were

developed in the vein of critical place-based pedagogy, imparting key knowledge about the area – in this case, a silent area of the Library - and giving students a mapping based activity, with a moderately clear outcome – collecting a puzzle piece with another section of the to-do list – beyond which they were free to act independently to analyse, plan and execute their learning (Langran & Dewitt, 2020).

This format of classic escape room-style puzzle-solving, supported by object- and place-based analysis echoed throughout the event's design, created a cycle wherein students engaged with different areas of the Library and their associated tasks (e.g. returning a DVD, picking up a reservation). The escape room-like clues (instructional posters, exhibition text) and the overlaid commentary of the ghost was used to underpin their understanding both implicitly and overtly. Embracing an object-orientated model, for instance, the ghost of Lancelot paper-clip-chained a key book to the shelf leaving an invisible note emblazoned with 'For Reference Only' stickers saying that this was 'how they did it in my day'.

This, with some variation formed the intrinsic gameplay loops which supported the event: home base → excursion → clue leading back to home base → excursion, and reflected the moods and practices of play in which the students were engaging. By design, elements of the ILE alternated between devotional/sliding and intensity/shifting play modes (Karoff, 2013), following this loop of investigating and examining to encourage different types and levels of play-based engagement and learning in the space. Similarly, objects encountered by the students were designed to engage with shifting levels of numinosity. These ranged from the toy-like forms of overlarge jigsaw pieces, to pseudo-numinous objects like historic playing cards, or pirate maps to support the fiction of the narrative and aid developing play while carefully creating an experience which appeared excitingly genuine enough to aid the suspension of disbelief but still be an explicit invitation to engage in fun.

This leaves the final element of Bilbao-Quintana et al's signifiers of the escape room: '[r]ace against time' (2020, p5). Reflecting on our initial testing of the room, it became clear to us that, while the format benefited in those ways Bilbao-Quintana et al.'s list – encouraging time management, creating motivation – it also held the implicit assumption that players could fail. Failure to participate in or understand the Library was not an option or an implication we wished to make, as it would fundamentally reinforce the central components of exclusion that impact members of historically excluded groups, implying that in failing to create their Library bodies they have reduced their right of access to the space. Instead, recognising the value of a timed element to create a challenge, drive creative team working and give motivation, the decision was made to have a timer that counted up, inviting groups to compete against an average estimated time and one another. This also generated a level of flexibility which meant we could welcome solo players and give nuanced time bonuses where students with accessibility needs participated – for example accounting for the extra travel time for students with impaired movement or integrating pauses for students with fatigue.

Considerations

Throughout the development of the escape room, the team was conscious of integrating accessibility into our practice. This impacted the way in which the room developed physically, particularly in the choice to use a majority of self-made objects like the cryptex which we could construct with consideration for participants with fine motor control issues, and develop to have high contrast, tactile codes, over lock-boxes with small or difficult to turn wheels and keys or which rely on primarily visual clues.

Though we aimed to create a cohesive tour of the Library through the tasks assigned during the game, as part of our facility awareness requirement, the development process highlighted a number of areas that due to the ongoing development of the Library space were inaccessible to students in wheelchairs. As such these areas were cut from key gameplay, though the route of many participants led to their incidental discovery.

The conceit of the exhibition did however lend itself well to the creation of materials suitable to students with visual impairments and dyslexia, by including as a standard part of the fiction large print labelling and mostly non-regular, unsymmetrical fonts on high contrast, slightly coloured paper. The only extra intervention needed to accommodate any students with extra needs was to generate a more accessible version of the hidden writing found throughout the game.

Outcomes

As the delivery of the project is still in progress, we have only been able to engage in immediate post-game qualitative analysis of the event. Upon completing the game students are asked if they feel they know the library better or have a better understanding of how it works. Most respondents shared that they were more comfortable in the space, and frequently discussed places within the Library they had not known about before, both those included in the game and not – like the Law Library or Student Kitchen. Students expressed an increased level of comfort with Library processes – a sense of knowing how to – and significantly appeared to have integrated Library specific language into how they discussed the space. Overall, teams enjoyed the challenge and expressed themselves as having had fun. Their behaviour in the Library and particularly toward Library staff showed clear indicators of increased comfort, suggesting they felt safe in the space and would be happy engaging with Library staff in the future if they needed to.

Universally, however, teams expressed concern about the time taken to complete the event. They worried that this implied they were “not very good” at the tasks, despite expressing an increased level of confidence in their library usage and skills. This issue may be negated going forward by removing or adjusting the estimated timings.

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