The Journal of Academic Librarianship 52 (2026) 103372

Contents lists available at ScienceDirect

The Journal of Academic Librarianship

journal homepage: www.elsevier.com/locate/jacalib

Exploring the affective dimensions of an immersive library induction through the lens of simulation-based learning

Andrew Taylor [a]

[a] Liverpool Hope University, Hope Park, Taggart Avenue, Childwall, Liverpool, L19 9PR, United Kingdom

ARTICLE INFO

Keywords:
Library induction
Library orientation
Simulation-based learning
Immersive learning
Student transition
Student engagement
Library anxiety

ABSTRACT

Library induction can support the affective dimensions of student transition into higher education by reducing uncertainty, building confidence, and encouraging engagement with academic support. Despite growing interest in immersive and technology-enhanced approaches to library induction, little attention has been paid to the use of dedicated simulation environments. This study investigates student perceptions of an immersive library induction delivered in a Simulation Laboratory (Sim Lab), examining which elements students found most engaging and the extent to which the induction provided indicators of affective engagement relevant to student transition. Data were collected through an anonymous post-session survey completed by 44 first-year undergraduate students. Findings were positive, with 98% of respondents reporting that they enjoyed the induction and 84% expressing a desire for more teaching to take place in the Sim Lab. Students most frequently described the experience as 'different', 'fun', and 'interactive', while games and quizzes emerged as the most engaging activities. Although affective outcomes were not measured directly, the findings provide indirect indicators of positive affective engagement and student engagement. This study addresses a gap in the library induction literature concerning the use of dedicated simulation environments and proposes simulation-based learning as a framework for understanding immersive library induction and student transition into higher education.

Introduction

Library induction (widely referred to as library orientation in the literature) typically represents a student's first formal encounter with the academic library and its staff. While traditionally conceived as an introduction to physical library spaces, resources, and services (Du Mont & Schloman, 1995), an increasing body of scholarship positions induction as a transition intervention that supports students' emotional, as well as informational, needs. These affective functions include reducing library anxiety, building confidence, encouraging help-seeking behaviour, fostering a sense of belonging, and supporting successful transition into higher education (Hughes et al., 2016; Mellon, 1986; Parks, 2019). These aims align with broader student-success scholarship that emphasises belonging, wellbeing, and supportive learning environments (Emerson, 2025). Achieving these outcomes can prove challenging, however, as library inductions that rely on passive and information-heavy delivery methods, such as traditional lectures and guided tours, are frequently associated with disengaged learners (Morgan & Davies, 2004).

A desire to increase student engagement has prompted librarians to experiment with a wide range of innovative approaches to induction, including active and flipped learning (Hughes et al., 2016), game-based activities (Giles et al., 2019), self-paced online inductions (Michalak & Rysavy, 2023), and virtual and augmented reality inductions (Ariya et al., 2025; Kannegiser, 2021). Despite growing interest in immersive forms of library induction, relatively little research has examined the use of dedicated simulation environments as settings for induction activities. This is surprising given the established role of simulation-based learning in disciplines, such as healthcare, aviation, military training, engineering, and teacher education, where simulation is used to help learners build confidence, reduce anxiety, and engage with authentic scenarios in safe and controlled environments (Altinbas et al., 2025;Lateef, 2010 ; Motola et al., 2013).

The educational rationale underpinning simulation-based learning, which emphasises reducing anxiety, building confidence, and preparing learners for engagement with unfamiliar environments (Lateef, 2010; Motola et al., 2013), may also have relevance for library induction. Although the consequences of poor engagement with library services differ from those associated with clinical practice or aviation training, students experiencing library anxiety may avoid seeking help, underuse

E-mail address: taylora@hope.ac.uk.

https://doi.org/10.1016/j.acalib.2026.103372
Received 8 September 2026; Received in revised form 10 November 2026; Accepted 12 November 2026
Available online 16 November 2026
0099-1333/© 2026 The Author. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

resources, and miss opportunities for academic support (Mellon, 1986; Parkin, 2025). These concerns have long been explored in the literature on library anxiety, which identifies barriers relating to staff interaction, unfamiliar environments, lack of confidence in navigating library resources and services, and fears of making mistakes (Bostick, 1992; Mellon, 1986). The overlap between the affective objectives of library induction and the educational aims of simulation-based learning suggests that simulation-based learning may provide a useful framework for understanding immersive library induction. To explore this proposition, this paper evaluates an interactive library induction delivered in the Simulation Laboratory (Sim Lab) at Liverpool Hope University. The study examines students' perceptions of the induction experience, the activities they found most engaging, and the extent to which the induction provided indicators of affective engagement relevant to successful transition into higher education.

The remainder of this paper is structured as follows. The Literature review section of the paper examines existing scholarship relating to library induction, library anxiety, student transition, immersive learning, and simulation-based learning, before identifying a gap concerning the use of dedicated simulation environments for library induction and presenting the study's research questions. The Methodology section outlines the research methodology, including the design of the Sim Lab induction, data collection procedures, and ethical considerations. The Results section presents the survey findings, while the Discussion section interprets the results in relation to the research questions and considers the potential of simulation-based learning as a framework for understanding immersive library induction. Finally, the Conclusion section summarises the study's contributions, acknowledges its limitations, and identifies opportunities for future research.

Literature review

The purpose of library induction

Library induction occupies a distinctive place within library instruction. Whereas library instruction has traditionally extended beyond induction to include bibliographic instruction, resource discovery, and the development of library research skills (Rice Jr., 1981), library induction is primarily concerned with introducing students to physical library spaces, services, resources, and support. Du Mont and Schloman (1995) define library induction as an introduction to the physical library, along with its resources and services, but argue that the purpose of induction extends beyond information transfer and includes promotional and affective objectives, such as encouraging use and reducing anxiety. This broader understanding of induction is particularly relevant in the context of students' transition into higher education, which requires them to navigate unfamiliar academic, social, and institutional environments (Hughes et al., 2016). Contemporary research suggests that successful transition depends not only on academic adjustment, but also on confidence, belonging, and access to appropriate support networks (Emerson, 2025; Thomas, 2012). From this perspective, library induction can be understood as more than an introduction to library resources and services. It can also help students become familiar with sources of academic support, build confidence in seeking assistance, and develop a sense of belonging within the university community.

Library anxiety

Reducing library anxiety has emerged as a particularly important objective of library induction. Mellon's (1986) influential study found that between 75% and 85% of students experienced anxiety about using academic libraries, while Bostick (1992) subsequently operationalised the concept through the Library Anxiety Scale, identifying barriers relating to library staff interaction, emotional factors, the library environment, library resources and services, and mechanical barriers. Research continues to suggest that library anxiety can negatively affect student engagement (Mellon, 1986; Parks, 2019), particularly for students facing additional transition or academic challenges, including first-in-family students and law students experiencing high academic pressures (Adamecz-Volgyi et al., 2021; Parkin, 2025). More recent scholarship has challenged deficit-based interpretations of library anxiety, arguing that responsibility should not rest solely with students to adapt to institutional norms. Instead, libraries should adopt student-centred approaches that recognise diverse experiences and address structural barriers to participation (Emerson, 2025; Maluski & Bruce, 2022). This shift has important implications for library induction design. Supporting this perspective, Parks (2019) found that although both traditional instruction and a warmth-based intervention reduced anxiety, sessions deliberately designed to appear more welcoming produced greater improvements in students' comfort with library staff. Together, these findings suggest that effective library inductions should address emotional, as well as informational, needs.

Engagement challenges

Despite their importance, library inductions have historically struggled to engage students. Traditional lecture and tour formats have frequently been criticised for promoting passive learning, with Morgan and Davies (2004) describing such inductions as generating ‘blank faces, glazed-over eyes and stifled yawns’ (p. 4). These challenges are often compounded by the timing of induction, which takes place during students' transition into higher education, a period characterised by adjustment to unfamiliar academic, social, and institutional environments (Hughes et al., 2016). Librarians must often communicate substantial amounts of information in brief sessions delivered to large cohorts at a time when students may not yet recognise the relevance of library services. In response, librarians have increasingly sought to address these engagement challenges by moving away from traditional approaches in favour of more active and student-centred forms of induction (Hughes et al., 2016).

Innovative responses to student engagement challenges

In response to longstanding concerns regarding student engagement, librarians have experimented with a wide range of innovative approaches designed to make induction more active, participatory, and student centred. Although the approaches adopted vary considerably, they are typically employed to encourage engagement with library services while helping students develop confidence, build familiarity with available sources of support, and form positive perceptions of the library during their transition into higher education.

Active and student-centred approaches

The ‘Cephalonian Method’ developed by Morgan and Davies (2004) used music, humour, and pre-assigned questions to transform induction from a conventional presentation into an interactive experience. The approach sought to overcome student passivity and was subsequently adapted for a school library by King and Heath (2010), where increased enthusiasm and willingness to use the library were reported. Similarly, Essex and Watts (2011) replaced a traditional one-stop induction with a task-based active learning approach. Their findings indicated greater student engagement and increased use of library resources, particularly journals. Hughes et al. (2016) extended active learning principles through a flipped-learning model, in which international students completed a self-guided library quest before participating in facilitated discussion and reflection. Students described the experience as ‘fun’, ‘helpful’, and ‘innovative’, reported greater confidence in using library services, and perceived the library as a more welcoming and supportive environment. These findings suggest that active and student-centred approaches can support not only students' understanding of library services, but also the affective dimensions of student transition. Walker (2017) adopted a student-centred approach by replacing information-

heavy presentations with shorter promotional sessions focused on building relationships and reducing intimidation. More recently, Planansky and Romanchock (2025) redesigned a first-year business library induction using a Choose Your Own Adventure model that allowed students to select activities most relevant to their needs and interests. The approach sought to address disengagement, repetition, and differing levels of prior library experience by giving students greater autonomy and encouraging self-directed exploration of resources. Their findings suggested that induction activities became more engaging when students were able to exercise choice and connect learning activities to their own academic interests.

Gamification

Gamification is a frequently used strategy for increasing engagement and reducing passive participation. Low-technology examples include Scrabble Scramble (Vrbancic & Byerley, 2018) and an Apples-to-Apples-style library induction card game (Giles et al., 2019). Despite requiring minimal technology, these interventions consistently reported positive student responses, increased awareness of services, and greater comfort with library staff. Rosenstein (2013) transformed library induction into an interactive Ghost Hunters mystery, in which students solved clues while exploring library resources and services. By embedding learning in a game-based narrative, the activity sought to increase participation while encouraging autonomy and engagement with library resources. More immersive approaches include Reade's (2017) puzzle-room induction, which transformed induction into a collaborative challenge requiring students to use teamwork to solve library and research-related problems. Similarly, Lange (2015) redesigned an MBA library induction around competitive team-based challenges, using resource-navigation tasks and Battledecks activities to encourage active participation and engagement. Collectively, these interventions suggest that game-based approaches can successfully increase engagement and contribute to more positive induction experiences.

Technology-enhanced library induction

Alongside low-technology innovations, librarians have increasingly adopted digital technologies to extend the reach, flexibility, and accessibility of library induction. Self-paced online inductions (Georgas, 2014), Teachable-based tutorials (Michalak & Rysavy, 2023), and LibWizard inductions (Schilperoort et al., 2022) have often been developed in response to staffing constraints, growing demand, and the need for scalable asynchronous support. The COVID-19 pandemic further accelerated experimentation with virtual induction formats, including Twine-based Choose Your Own Adventure activities (Sewell, 2021) and virtual medical library inductions (Hickner et al., 2021). More recently, immersive technologies, such as augmented reality and virtual reality, have been used to create richer induction experiences. Kannegiser (2021) found that an augmented reality scavenger hunt improved students' perceptions of librarian helpfulness, while Ariya et al. (2025) and Yensathit et al. (2025) demonstrated that virtual reality orientations can improve accessibility and reduce anxiety for students with disabilities. These studies suggest that, while technology is not a prerequisite for successful induction, immersive technologies may offer additional benefits, particularly in relation to affective outcomes.

Simulation-based learning

Simulation-based learning is an established pedagogical approach that enables learners to practise skills, make decisions, and receive feedback in safe and controlled environments before encountering similar situations in real-world contexts (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013). Although simulation is frequently associated with certain technologies, such as virtual reality, the literature generally conceptualises simulation as a pedagogical approach that can be implemented through a variety of technologies, environments, and learning activities rather than as a technology in its own right (Issenberg et al., 2005; Lateef, 2010). Simulation laboratories, originally developed for healthcare education, provide realistic environments in which learners can develop confidence, preparedness, communication, teamwork, and decision-making skills through repeated practice (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013). Effective simulation-based learning is characterised by active participation, opportunities for feedback, and the ability to make and learn from mistakes without adverse real-world consequences (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013). Similar approaches are used across a wide range of disciplines, including aviation, military training, engineering, and teacher education, where opportunities for authentic practice may be limited, costly, dangerous, or ethically challenging. The effectiveness of simulation-based learning is commonly explained through experiential learning (Kolb, 1984), constructivism (Vygotsky, 1978), situated learning (Lave & Wenger, 1991), and related theories that emphasise active participation and learning through experience rather than passive information reception. Although library induction differs substantially from the professional contexts in which simulation-based learning is most commonly used, it similarly seeks to prepare learners for engagement with unfamiliar environments by reducing uncertainty and building confidence, objectives that closely resemble the affective and preparatory functions of simulation-based learning (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013). From this perspective, simulation-based learning provides a useful framework for understanding immersive library induction as a form of transition support that addresses both the informational and affective dimensions of entry into higher education.

Research questions

Despite considerable innovation in library induction, including other immersive approaches, little attention appears to have been paid to the use of dedicated simulation environments as settings for library induction. Given this gap in the literature, this study examines student perceptions of an immersive Sim Lab induction and addresses the following research questions:

RQ1: How do students perceive an immersive Sim Lab induction?
RQ2: Which elements of the induction are perceived as most engaging?
RQ3: To what extent does the induction provide evidence of affective engagement relevant to successful transition into higher education?

Methodology

Research design

This study employed a secondary data analysis (SDA) of anonymised survey responses collected following an immersive library induction delivered in the Sim Lab at Liverpool Hope University. Secondary data analysis involves the reuse of existing data to address new research questions that differ from, or extend, the purposes for which the data were originally collected (Bishop, 2007; Wickham, 2019). The survey analysed in this study was originally developed as a service evaluation tool rather than a research instrument and was administered immediately following the induction to gather student feedback on the experience. The present study re-examined these evaluation data to explore students' perceptions of the induction and to consider the extent to which participants' responses may provide insight into affective dimensions of the transition experience. As the dataset was not originally collected for research purposes, the research questions were necessarily developed in dialogue with the available data. This is a recognised characteristic of SDA and can result in an imperfect fit between research objectives and available measures (Baldwin et al., 2022; Bishop, 2007). Consequently, some concepts of interest could only be explored indirectly through existing survey items rather than through instruments

specifically designed to measure those constructs. Throughout the analysis, care was taken to distinguish between direct evidence provided by the survey responses and broader interpretations informed by relevant literature.

The Sim Lab library induction

The Sim Lab was originally developed to support simulation-based learning across a range of disciplines and was subsequently made available for wider institutional experimentation with immersive learning. The octagonal space uses Immersive Interactive technology to project digital content across the room's walls, creating an environment that differs substantially from a conventional classroom or teaching laboratory. Unlike traditional library inductions, which often rely on presentations or guided tours, the Sim Lab induction was designed as a participatory, multi-sensory experience that encouraged movement, discussion, and interaction. The design of the library induction was informed by literature relating to library anxiety, active learning, student engagement, and gamification. Rather than attempting to deliver large amounts of procedural information, the induction sought to promote engagement, participation, and positive perceptions of library support. Activities were distributed throughout the space and included interactive quizzes, games, information walls, short instructional videos, and interactive maps. Students moved freely through the environment and engaged with content at their own pace. Several activities were designed specifically for the immersive environment, with particular attention given to increasing the visibility and perceived accessibility of library staff. One team-based game involved students scoring points by 'splatting' projected images of library staff members' heads as they floated across the walls. Although playful in nature, the activity aimed to increase students' familiarity with library staff and support subsequent recognition and help-seeking. Referencing and artificial intelligence literacy quizzes, developed from existing library guidance materials, were completed collaboratively while students sat together on bean bags, creating an informal and discussion-oriented learning environment. Short TikTok-style videos introduced practical aspects of library use, including printing and the out-of-hours return of books. Interactive maps allowed students to explore library spaces, services, and collections through direct engagement rather than passive observation. Collectively, these activities were intended to familiarise students with key library services while fostering confidence, participation, and a sense of connection with library staff.

Survey participants

Participants were first-year undergraduate students enrolled within the Faculty of Business, Law and Criminology who attended an immersive library induction delivered across seven Sim Lab sessions. Approximately 120 students attended the inductions, of whom 44 completed the post-session evaluation survey, representing a response rate of 36.7%. Participants were recruited through convenience sampling from students attending the scheduled induction sessions and were drawn primarily from business-related degree programmes, although some were enrolled on joint-honours courses that included subjects outside the faculty. Forty respondents completed the final demographic question concerning their subject of study.

Research ethics

Ethical approval was granted by the Research Ethics Committee of Liverpool Hope University. Participation in the original evaluation survey was voluntary, responses were anonymous, and no personally identifiable information was collected. Students were informed that the survey was being used to evaluate the induction and were free to decline participation without consequence. Following completion of the evaluation, approval was obtained from the university to use the anonymised responses as secondary data for research purposes.

Survey instrument

Data were collected using an online survey administered through Jisc Online Surveys immediately following each induction session. The survey was designed as a practical service evaluation tool rather than a validated research instrument and was not subjected to formal psychometric testing. No reliability or validity testing was undertaken.

The survey consisted of six items:

Q1. Overall, did you enjoy the library's interactive induction in the Sim Lab?
- Response options: Yes/No

Q2. Which elements of the interactive induction did you enjoy?
- Games (floating librarian heads/books)
- Quizzes (AI Literacy/Referencing)
- Videos
- Interactive maps
- Information walls (librarians and useful links)
- Other (please specify)

Q3. Would you like more of your lessons to take place in the Sim Lab?
- Response options: Yes/No

Q4. Which of the following words would you use to describe the interactive library induction? (Choose as many as you want.)
- Fun
- Different
- Educational
- Interactive
- Memorable
- Other (please specify)

Q5. Is there anything you would change about the interactive library induction to make it better?
- No
- Yes (please give more details)

Q6. What subject(s) are you studying?
- Open-text response.

The survey was designed to capture participants' immediate perceptions of the induction experience rather than learning outcomes. Consequently, the survey is suitable for exploring student enjoyment, engagement, perceptions, and acceptance of the Sim Lab environment, but it cannot provide direct evidence of learning gain, behavioural change, library anxiety, confidence, or sense of belonging. Several items and response options were positively framed, including descriptors such as 'fun', 'interactive', 'educational', and 'memorable'. This may have introduced acquiescence bias and increased the likelihood of favourable responses. Although opportunities were provided for open-ended feedback and alternative responses through 'Other' options, the findings should be interpreted as indicative of participants' perceptions of the induction experience rather than as independent evidence of its effectiveness.

Interpreting affective outcomes

Although the study sought to explore affective dimensions of the induction experience, the survey did not include validated measures of library anxiety, confidence, belonging, help-seeking behaviour, or other established affective constructs. However, positive reactions to educational activities are commonly interpreted within educational research as indicators of emotional engagement (Fredricks et al., 2004; Kahu, 2013). Similarly, enjoyment, perceived value, and willingness to participate in future activities are recognised indicators of learner reaction within training evaluation frameworks (Kirkpatrick & Kirkpatrick, 2016). Accordingly, the present study interpreted specific survey responses as indirect indicators of positive affective engagement

rather than as direct measures of psychological constructs. Table 1 presents the interpretive framework used in the analysis.

Positive responses to the survey items were interpreted as indirect indicators of positive affective engagement with the induction experience. Consistent with Fredricks et al. (2004), Kahu (2013), and Kirkpatrick and Kirkpatrick (2016), these indicators were used to inform discussion of students' emotional engagement and perceptions of the induction. However, the survey did not directly measure confidence, belonging, help-seeking behaviour, or library anxiety. Consequently, any discussion of these constructs represents a theoretical interpretation informed by the literature rather than a direct empirical finding.

Data analysis

Survey responses were analysed using descriptive statistics. Frequencies and percentages were calculated for each survey item. For multiple-response questions (Q2 and Q4), each response option was analysed independently, and percentages represent the proportion of respondents selecting a particular option. Consequently, percentages reported for these questions do not total 100%. Responses concerning preferred induction activities and descriptive perceptions of the induction were analysed by examining the frequency with which individual activities and descriptors were selected. These data were used to identify patterns in participants' perceptions of both the induction and the Sim Lab environment.

The survey also generated a small amount of qualitative data. Five open-text comments were submitted. One comment identified a particularly valued aspect of the induction, while four comments suggested potential improvements. Given the limited volume of qualitative data, comments were subjected to simple thematic categorisation rather than formal qualitative analysis. Comments were grouped into broad themes relating to learning value, the physical environment, interactivity, and technical improvements. The qualitative findings were used primarily to contextualise and support interpretation of the quantitative results rather than generate independent thematic conclusions. The predominance of minor suggestions rather than substantive criticisms was considered alongside the quantitative findings when evaluating participants' overall perceptions of the induction experience.

Methodological limitations

Several methodological limitations should be acknowledged. First, the study relied on secondary analysis of survey data originally collected for operational evaluation purposes rather than research. As a result, there was an inherent limitation regarding the alignment between the research questions and the available measures. Second, the survey instrument was not a validated research survey and did not include established measures of confidence, belonging, help-seeking behaviour, engagement, or library anxiety. Consequently, conclusions relating to affective outcomes are necessarily interpretive and based on proxy indicators rather than direct measurement. Third, the survey contained predominantly positive evaluative framing, which may have contributed to acquiescence bias. Although respondents were able to provide open-ended comments and alternative responses, opportunities for expressing negative perceptions were limited. Fourth, data were collected immediately following the induction and therefore reflect short-term perceptions rather than longer-term impacts on library use, academic behaviour, information literacy development, or student success. Fifth, the survey response rate of 36.7% means that the findings may not fully reflect the views of all students who attended the inductions. As participation was voluntary, there is a possibility of non-response bias, whereby students with particularly positive or negative views may have been more likely to complete the survey. Finally, the absence of a comparison group means that the study cannot determine whether the observed responses were attributable to the immersive characteristics of the Sim Lab or would have occurred following a more traditional library induction.

Table 1
Analytical framework for interpreting survey responses as indicators of affective engagement.

Survey question	Interpretation used in this study
Q1. Overall, did you enjoy the library's interactive induction in the Sim Lab?	Overall enjoyment was treated as an indicator of emotional engagement with the induction experience.
Q2. Which elements of the interactive induction did you enjoy?	Preferences for particular activities were used to explore engagement with active and participatory learning approaches incorporated within the induction.
Q3. Would you like more of your lessons to take place in the Sim Lab?	Willingness to participate in future Sim Lab-based teaching was considered an indicator of positive disposition towards the immersive learning environment.
Q4. Which of the following words would you use to describe the interactive library induction?	Descriptive terms selected by participants were used to explore affective and experiential perceptions of the induction.
Q5. Is there anything you would change about the interactive library induction to make it better?	Feedback and suggestions for improvement were examined to identify perceptions of the strengths and limitations of both the induction and the Sim Lab environment.

Results

Student reception to the Sim Lab induction

The survey findings indicate a positive reception to the library induction delivered in the Sim Lab environment. Of the 44 respondents, 98% (n = 43) reported enjoying the induction, while 84% (n = 37) stated that they would like more teaching to take place in the Sim Lab. These findings suggest positive perceptions of both the induction itself and the Sim Lab environment in which it was delivered. Students' willingness to participate in future Sim Lab-based teaching suggests that the environment was perceived positively and may have potential as a setting for future library teaching activities.

Engagement with induction activities

Students were asked to identify the elements of the induction they enjoyed most. The most frequently selected activity was a game-based component involving floating librarian heads and books, chosen by 75% of respondents (n = 33). Interactive quizzes covering AI literacy and referencing were selected by 57% (n = 25). Videos and interactive maps were each selected by 39% (n = 17), while information walls featuring library staff and resources were selected by 36% (n = 16). These findings indicate a preference for activities that required active participation. Interactive and game-based elements were selected more frequently than informational components, although positive responses were recorded across all activities. One respondent commented that they enjoyed learning ‘where everything is and how to use’ the library, suggesting that at least some participants perceived practical value alongside the interactive elements of the induction.

Perceptions of the induction experience

Students were also asked to select words that they felt described the induction experience. The most frequently selected descriptors were ‘different’ (75%; n = 33), ‘fun’ (73%; n = 32), and ‘interactive’ (70%; n = 31). Other commonly selected terms included ‘educational’ (57%; n = 25) and ‘memorable’ (39%; n = 17). These responses suggest that students perceived the induction as a distinctive and engaging learning experience. The frequent selection of terms such as ‘fun’, ‘interactive’, and ‘educational’ suggests that participants associated the induction with both enjoyment and educational value. The selection of

'memorable' by a substantial proportion of respondents suggests that participants regarded the experience as noteworthy or distinctive, although longer-term retention was not measured. Collectively, these findings indicate that participants associated the induction with positive emotional and experiential characteristics, consistent with the indicators of affective engagement outlined in the analytical framework (see Table 1).

Suggestions for enhancement

Table 2 summarises the qualitative comments by theme. Forty respondents (91%) indicated that no changes were required, while four respondents (9%) suggested improvements to the induction. These comments focused primarily on enhancements to the physical environment and requests for additional interactive content rather than criticisms of the overall approach. Suggestions included additional bean bags, softer interactive touch surfaces, more activities, and improvements to minor technical issues affecting some wall displays. Together, these comments suggest that participants viewed potential improvements as refinements to the existing approach rather than fundamental changes to the induction design.

Discussion

RQ1: student perceptions of an immersive Sim Lab induction

The findings suggest that students perceived the Sim Lab induction positively. High levels of enjoyment and a widely expressed desire for future teaching in the Sim Lab indicate that students were receptive not only to the induction itself but also to the immersive learning environment in which it was delivered. These findings align with previous studies of active and student-centred library inductions, which have consistently reported positive student responses to more participatory approaches (Essex & Watts, 2011; Giles et al., 2019; Hughes et al., 2016). The findings also suggest that simulation environments may have potential as educational settings beyond their traditional disciplinary applications. While simulation laboratories are most commonly associated with healthcare education, students appeared willing to engage with the space as a setting for library learning. This supports broader arguments in the simulation literature that simulation-based learning represents a flexible pedagogical approach rather than a technology tied to a specific subject area (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013).

RQ2: engagement with induction activities

Students expressed clear preferences for activities that required active participation. Game-based activities and interactive quizzes were consistently rated more highly than videos, maps, or information walls, suggesting that students were particularly attracted to learning experiences that involved interaction, challenge, and decision-making. These findings reinforce longstanding arguments in the library induction literature that active learning approaches are more engaging than traditional information-transmission models (Morgan & Davies, 2004; Essex & Watts, 2011; Hughes et al., 2016). Similar conclusions have been reported in studies of puzzle rooms (Reade, 2017), library games (Giles et al., 2019), and augmented reality scavenger hunts (Kannegiser, 2021). Viewed through the lens of constructivist and experiential learning theory, the popularity of games and quizzes suggests that students responded positively to opportunities to engage directly with content rather than acting as passive recipients of information (Kolb, 1984; Vygotsky, 1978). From a practical perspective, the findings indicate that future Sim Lab inductions would benefit from continuing to prioritise interactive and gamified elements over more passive forms of content delivery.

Table 2
Qualitative comments by theme.

Theme	Number of comments	Survey response
Learning value	1	'Where everything is and how to use'
Physical environment	2	'Soften the walls'; 'More bean bags'
Content	1	'Add more things'
Technology	1	'Make the first two walls work'

RQ3: evidence of affective engagement relevant to successful transition

Although the study did not directly measure library anxiety, confidence, belonging, or help-seeking behaviour using validated instruments, the findings provide evidence of positive affective engagement that may be relevant to discussions of student transition. Students frequently described the induction as 'fun', 'interactive', 'different', and 'educational', while overall enjoyment levels were high. These responses suggest positive emotional engagement with the induction experience. Consistent with the methodological framework outlined earlier, these findings should not be interpreted as evidence that the induction reduced library anxiety or increased confidence. Rather, they suggest that participants responded positively to aspects of the induction associated with affective objectives frequently identified in the library induction literature (Hughes et al., 2016; Mellon, 1986; Parks, 2019). Positive emotional responses, willingness to participate in future Sim Lab activities, and favourable perceptions of the learning environment may be relevant to discussions of engagement with library services and support, although such outcomes were not measured directly.

The findings are particularly interesting when considered through the lens of simulation-based learning. Simulation is often valued for providing safe environments in which learners can develop familiarity and confidence before engaging in real-world practice (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013). Although library induction differs substantially from professional simulation contexts, both share a common aim of preparing learners for engagement with unfamiliar environments. Viewed in this way, the positive responses reported by students suggest that immersive induction may help establish favourable first impressions of library services and support students' transition into higher education. While further research employing validated measures of confidence, belonging, and library anxiety is required, the findings provide preliminary support for the argument that simulation-based learning offers a useful framework for understanding how immersive library inductions can address both the informational and affective dimensions of student transition.

Simulation-based learning as a framework for library induction

A key contribution of this study is the potential to position simulation-based learning as a useful framework for understanding immersive library induction. Existing literature has typically interpreted innovative induction practices through the lenses of active learning, gamification, educational technology, and information literacy education (Giles et al., 2019; Hughes et al., 2016; Michalak & Rysavy, 2023). While these perspectives help explain how induction activities are delivered, they offer less insight into why immersive approaches appear to generate positive emotional and engagement-related responses. Simulation-based learning offers an alternative lens through which immersive library induction can be understood. Across disciplines, such as healthcare, aviation, engineering, and military training, simulation is valued not only for supporting knowledge and skills development, but also for reducing uncertainty, building confidence, and preparing learners for participation in unfamiliar environments (Issenberg et al., 2005; Lateef, 2010; Motola et al., 2013). Although library induction

takes place in a different context, many of the underlying challenges are comparable. Students entering higher education must navigate unfamiliar systems, spaces, expectations, and support structures, often while experiencing uncertainty about how and when to seek help. Such concerns have long been explored through the literature on library anxiety, which highlights barriers relating to staff interaction, unfamiliar environments, lack of knowledge, and fears of making mistakes (Bostick, 1992; Mellon, 1986). Viewed from this perspective, immersive library induction can be understood as a form of preparation for academic participation. Rather than rehearsing professional procedures, students are introduced to information resources, support services, and help-seeking behaviours before they become essential to their academic success. The value of the Sim Lab therefore lies less in its technological novelty than in its capacity to create a low-risk environment that encourages interaction, familiarisation, and positive early encounters with library support. While the present study does not demonstrate reductions in library anxiety or increases in confidence directly, the positive responses reported by students suggest that this perspective warrants further exploration. The findings provide preliminary support for the argument that simulation-based learning offers a useful framework for understanding immersive library induction as a form of preparation for academic participation that addresses both the informational and affective dimensions of student transition.

Implications for academic librarianship

The findings have several implications for academic librarians and the design of library inductions. First, they reinforce growing recognition that successful induction involves more than the transmission of information. Alongside introducing students to resources and services, induction may also contribute to broader objectives relating to engagement, perceptions of support, and the affective dimensions of student transition (Emerson, 2025; Mellon, 1986; Parks, 2019). Second, the study encourages librarians to view induction as a form of transition support. By creating welcoming, engaging, and low-pressure opportunities for interaction with library services, induction activities may help foster positive perceptions of academic support structures during students' early transition to higher education. This perspective aligns with student-success research that emphasises belonging, engagement, and access to support as important foundations for successful transition into higher education (Emerson, 2025; Thomas, 2012). Third, the findings support previous research highlighting the value of active and participatory learning approaches. Students responded most positively to games and quizzes, reinforcing evidence that opportunities for interaction, challenge, and exploration can enhance engagement with induction activities (Morgan & Davies, 2004; Hughes et al., 2016; Giles et al., 2019; Reade, 2017). Finally, the study suggests that pedagogy may be more important than technology. The positive responses observed should not be interpreted as evidence that immersive technologies are inherently superior to lower-technology approaches. Rather, the effectiveness of the Sim Lab induction appears to have stemmed from its ability to support participation, interaction, and active engagement with content. While further research is required to assess longer-term outcomes, the findings suggest that simulation environments represent a promising addition to the range of pedagogical approaches available for library induction.

Conclusion

This study explored student perceptions of an immersive library induction delivered in the Sim Lab at Liverpool Hope University. The findings suggest that students responded positively to the induction, most frequently describing it as ‘fun’, ‘interactive’, ‘different’, and ‘educational’. Students also demonstrated a clear preference for active and participatory learning activities, with games and quizzes emerging as the most popular elements of the induction. Although the study did not directly measure library anxiety, confidence, belonging, or help-seeking behaviour, the findings provide preliminary evidence of positive affective engagement that may be relevant to student transition into higher education. Together, the results suggest that immersive learning environments can provide an engaging context for library induction and may contribute to the affective objectives frequently associated with successful student transition into higher education.

Contribution to the literature

This study contributes to the growing literature on innovative library induction by addressing a gap concerning the use of dedicated simulation environments in academic librarianship. While previous research has explored active learning, gamification, escape rooms, online induction systems, augmented reality, and virtual reality, relatively little attention has been paid to the use of simulation laboratories for library induction. Beyond its empirical contribution, the study also proposes simulation-based learning as a useful framework for understanding immersive library induction. Existing discussions of innovative induction have typically been framed through active learning, gamification, educational technology, and information literacy. The findings presented here suggest that simulation-based learning may offer an alternative perspective by emphasising preparation, familiarisation, participation, and engagement within unfamiliar environments. From this perspective, immersive library induction can be understood as a form of preparation for academic participation. Just as simulation is used in professional education to provide safe opportunities for learners to develop familiarity and confidence before entering practice environments, immersive induction may provide opportunities for students to engage with library services, support structures, and help-seeking behaviours before they become critical to academic success. While this proposition requires further investigation using validated measures, it offers a novel theoretical lens through which immersive library induction may be understood as a form of preparation for academic participation.

Limitations

Several limitations should be acknowledged. First, the study did not employ validated measures of library anxiety, confidence, belonging, or self-efficacy, making it possible to identify only indirect indicators of affective engagement. Second, the absence of a comparison group prevented evaluation of the Sim Lab approach against more traditional forms of induction. Third, the findings derive from a single institution and a relatively small sample of survey respondents ($n = 44$ from approximately 120 induction participants), limiting their wider generalisability and raising the possibility of non-response bias. Finally, novelty effects may have contributed to students' positive evaluations. The fact that ‘different’ was one of the most frequently selected descriptors suggests that some responses may reflect the appeal of a new learning environment rather than the pedagogical design of the induction itself. Future research involving repeated exposure to immersive environments would help determine whether these positive perceptions persist once novelty has diminished.

Recommendations for future research

Future research should examine whether immersive library induction has measurable effects on library anxiety, confidence, belonging, and help-seeking behaviour using validated instruments, such as Bostick's Library Anxiety Scale. Where bespoke survey measures are employed, further work could develop and validate instruments designed specifically to capture the affective dimensions of immersive library induction. Future studies should also utilise more balanced evaluation tools that allow participants to express both positive and negative perceptions, as the positively framed survey items used in this

study may have constrained opportunities for critical feedback. Longitudinal research would help determine whether positive perceptions reported immediately following induction are sustained over time and whether they translate into greater engagement with library services. Studies based on primary data collection would also enable researchers to align data collection more closely with research objectives and incorporate validated measures of affective outcomes. In addition, comparative research designs involving control or comparison groups would strengthen claims regarding the unique contribution of immersive induction by enabling outcomes to be contrasted with those associated with more traditional induction approaches. Future work should also investigate whether immersive induction influences learning outcomes, including knowledge retention, information literacy development, and subsequent engagement with library services. Finally, there is scope to explore the application of simulation-based learning across a wider range of academic library activities, including information literacy teaching and academic skills development.

CRediT authorship contribution statement

Andrew Taylor: Writing – review & editing, Writing – original draft, Validation, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

I have nothing to declare.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.acalib.2026.103372.

Data availability

Data will be made available on request.

References

Adamecz-Volgyi, A., Henderson, M., & Shure, N. (2021). *'First in family': Higher education choices and labour market outcomes*. UCL Institute of Education.

Altinbas, B. C., Çalık, K. Y., Erdöl, E. K., Kırkbir, İ. B., Güner, S. G., Tezel, M., Özmen, G. Ç., Erdöl, H., & Bulut, H. K. (2025). The effect of simulation-based laboratory training on undergraduate nursing students' clinical skill, satisfaction, and self-confidence. *BMC Nursing, 24*(1), Article 1322.

Ariya, P., Yensathit, Y., Thongthip, P., Intawong, K., & Puritat, K. (2025). Assisting hearing and physically impaired students in navigating immersive virtual reality for library orientation. *Technologies, 13*(1), Article 2. https://doi.org/10.3390/technologies13010002

Baldwin, J. R., Pingault, J. B., Schoeler, T., Sallis, H. M., & Munafò, M. R. (2022). Protecting against researcher bias in secondary data analysis: Challenges and potential solutions. *European Journal of Epidemiology, 37*(1), 1–10. https://doi.org/10.1007/s10654-021-00839-0

Bishop, L. (2007). A reflexive account of reusing qualitative data: Beyond primary/secondary dualism. *Sociological Research Online, 12*(3). https://doi.org/10.5153/sro.1553

Bostick, S. L. (1992). *The development and validation of the Library Anxiety Scale*. Wayne State University (Doctoral dissertation).

Du Mont, M. J., & Schloman, B. F. (1995). The evolution and reaffirmation of a library orientation program in an academic research library. *Reference Services Review, 23*(1), 85–92. https://doi.org/10.1108/eb049238

Emerson, M. E. (2025). Beyond the traditional metrics: Understanding student success from the perspective of undergraduate students. *The Journal of Academic Librarianship, 51*(5), Article 103097.

Essex, J., & Watts, J.-A. (2011). Trialling an indicator of the impact of two library induction models. *New Review of Academic Librarianship, 17*(2), 222–233.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109. https://doi.org/10.3102/00346543074001059

Georgas, H. (2014). The implementation of an independent and self-paced online library orientation for freshman students and the use of Sakai as a quiz management system (QMS). *College & Undergraduate Libraries, 21*(1), 56–75. https://doi.org/10.1080/10691316.2014.877737

Giles, K., Shuyler, K., Evans, A., & Reed, J. (2019). Creating a library orientation card game to reach new transfer students. *Public Services Quarterly, 15*(1), 1–12. https://doi.org/10.1080/15228959.2018.1488643

Hickner, A., Wright, D., Merlo, L., Gordon-Elliott, J. S., & Delgado, D. (2021). Redesigning library orientation for first-year medical students during the pandemic. *Journal of the Medical Library Association, 109*(3), 497–502. https://doi.org/10.5195/jmla.2021.1190

Hughes, H., Hall, N., Pozzi, M., Howard, S., & Jaquet, A. (2016). Passport to study: Flipped library orientation for international students. *Australian Academic and Research Libraries, 47*(3), 124–142. https://doi.org/10.1080/00048623.2016.1225552

Issenberg, S. B., McGaghie, W. C., Petrusa, E. R., Gordon, D. L., & Scalese, R. J. (2005). Features and uses of high-fidelity medical simulations that lead to effective learning: A BEME systematic review. *Medical Teacher, 27*(1), 10–28. https://doi.org/10.1080/01421590500046924

Kahu, E. R. (2013). Framing student engagement in higher education. *Studies in Higher Education, 38*(5), 758–773. https://doi.org/10.1080/03075079.2011.598505

Kannegiser, S. (2021). Effects of an augmented reality library orientation on anxiety and self-efficacy: An exploratory study. *College & Research Libraries, 82*(3), 352–369. https://doi.org/10.5860/crl.82.3.352

King, K., & Heath, N. (2010). Cephalonian induction: It's well worth a try. *School Librarian, 58*(2), 76–77.

Kirkpatrick, J. D., & Kirkpatrick, W. K. (2016). *Kirkpatrick's four levels of training evaluation*. ATD Press.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Lange, J. (2015). MBA versus MBA challenge: Developing an engaging library orientation for incoming students. *Ticker: The Academic Business Librarianship Review, 1*(1). https://doi.org/10.3998/ticker.16481003.0001.103

Lateef, F. (2010). Simulation-based learning: Just like the real thing. *Journal of Emergencies, Trauma, and Shock, 3*(4), 348–352. https://doi.org/10.4103/0974-2700.70743

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Maluski, K., & Bruce, S. (2022, May 11). *Dispelling the myth of library anxiety and embracing academic discomfort*. In the Library with the Lead Pipe. https://digitalrepository.unm.edu/hslic-publications-papers/83/.

Mellon, C. A. (1986). Library anxiety: A grounded theory and its development. *College & Research Libraries, 47*(2), 160–165.

Michalak, R., & Rysavy, M. D. T. (2023). Meeting them where they are: Designing a new self-paced library orientation program for students in the learning management system. *Journal of Library Administration, 63*(1), 89–100. https://doi.org/10.1080/01930826.2022.2146442

Morgan, N., & Davies, L. (2004). Innovative library induction–introducing the Cephalonian method. *Sconul Focus, 32*(2), 4–8.

Motola, I., Devine, L. A., Chung, H. S., Sullivan, J. E., & Issenberg, S. B. (2013). Simulation in healthcare education: A best evidence practical guide. AMEE guide no. 82. *Medical Teacher, 35*(10), e1511–e1530. https://doi.org/10.3109/0142159X.2013.818632

Parkin, C. (2025). Alleviating library anxiety in law undergraduates. *Legal Information Management, 25*(2), 105–110. https://doi.org/10.1017/S1472669625100820

Parks, C. (2019). Testing a warmth-based instruction intervention for reducing library anxiety in first-year undergraduate students. *Evidence Based Library and Information Practice, 14*(2), 70–84.

Planansky, M., & Romanchock, M. (2025). Choose your own adventure: Overhauling and rightsizing a library orientation for first-year business students. *Ticker: The Academic Business Librarianship Review, 10*(1). https://doi.org/10.3998/ticker.7253

Reade, T. (2017). The clock is ticking: Library orientation as puzzle room. *Knowledge Quest, 45*(5), 48–53.

Rice, J., Jr. (1981). *Teaching library use: A guide for library instruction (contributions in librarianship and information science no. 37)*. Greenwood Press.

Rosenstein, J. (2013). Ghost hunters in the library: Using an interactive mystery game for freshman library orientation. *College & Research Libraries News, 74*(7), 350–353. https://doi.org/10.5860/crln.74.7.8975

Schilperoort, H. M., Chatfield, A. J., Dinalo, J. E., Saric, K. J., Thompson, H. J., & Thompson, A. M. (2022). A self-paced online library orientation: Development, implementation, and assessment. *Medical Reference Services Quarterly, 41*(3), 248–258. https://doi.org/10.1080/02763869.2022.2093546

Sewell, A. (2021). Creating a choose-your-own-adventure library orientation: The process of using a text-based, interactive storytelling tool to take your orientation virtual. *Journal of New Librarianship, 6*(1), 23–32. https://doi.org/10.33011/newlibs/10/3

Thomas, L. (2012). *Building student engagement and belonging in higher education at a time of change: Final report from the What Works? Student Retention and Success Programme*. Paul Hamlyn Foundation.

Vrbancic, E. K., & Byerley, S. L. (2018). High-touch, low-tech: Investigating the value of an in-person library orientation game. *College & Undergraduate Libraries, 25*(1), 39–51. https://doi.org/10.1080/10691316.2017.1318429

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Walker, C. (2017). How to get students into the library: Revamping a university library's welcome campaign. *Legal Information Management, 17*(4), 239–244. https://doi.org/10.1017/S1472669617000469

Wickham, R. J. (2019). Secondary analysis research. *Journal of the Advanced Practitioner in Oncology, 10*(4), 395–400. https://doi.org/10.6004/jadpro.2019.10.4.7

Yensathit, Y., Ariya, P., Intawong, K., & Puritat, K. (2025). Accessible virtual reality for library orientation: A user-centred approach for visually impaired learners in inclusive education. *Social Sciences & Humanities Open, 11*, Article 101630. https://doi.org/10.1016/j.ssaho.2025.101630