



Provided by the author(s) and NUI Galway in accordance with publisher policies. Please cite the published version when available.

Title	Breaking the SEAL: enhancing engagement with academic libraries and the Academy through educational design innovation in technology-enhanced learning
Author(s)	Fleming, Mary; Flynn, Paul; Hall, Tony; Houlihan, Barry; McSweeney, Niall
Publication Date	2018
Publication Information	Fleming, Mary , Flynn, Paul , Hall, Tony , Houlihan, Barry , & McSweeney, Niall. (2018). Breaking the SEAL: Enhancing engagement with academic libraries and the academy through educational design innovation in technology-enhanced learning. In Marwin Britto & Kirsten Kinsley (Eds.), Academic libraries and the academy: strategies and approaches to demonstrate your value, impact, and return on investment, Volume Two. Chicago: ACRL.
Publisher	Association of College and Research Libraries
Link to publisher's version	https://www.alastore.ala.org/content/academic-libraries-and-academy-strategies-and-approaches-demonstrate-your-value-impact-and-1
Item record	http://hdl.handle.net/10379/14579

Downloaded 2019-03-21T21:03:12Z

Some rights reserved. For more information, please see the item record link above.



Title: Breaking the SEAL: Enhancing Engagement with Academic Libraries and the Academy through Educational Design Innovation in Technology-Enhanced Learning

Abstract: Breaking the SEAL developed from a partnership between the James Hardiman Library and the School of Education at the National University of Ireland Galway. This initiative provides second-level students with opportunities to engage with an academic library and archives. Tangible learning outcomes include critical twenty-first-century skills: collaboration, critical engagement, academic writing, and digital library and information literacy. This novel program brings the academic library into contact with a wider audience while concomitantly advancing the strategic aims of the university. In addition to narrating the development of Breaking the SEAL, supporting materials, program time frames, and guidelines for adoption are provided.

Keywords: academic libraries, engagement, technology-enhanced learning

Project focus: assessment methodologies, techniques, or practices

Results made or will make case for: more funding, improvements in services, improvements in spaces, proof of library impact and value, a strategic plan or process, how money or resources may be directed

Data needed: student engagement with archival materials

Methodology: mixed method

Project duration: between 6 months and a year

Tool(s) utilized: archival materials, specialized staff trained in handling archival material, experts in pedagogy, digital recorders both audio and video, proprietary analysis software

Cost estimate: \$2,000–\$5,000

Type of institution: university—public

Institution enrollment: 15,000–30,000

Highest level of education: doctoral



Chapter 25

Breaking the SEAL

Enhancing Engagement with Academic Libraries and the Academy through Educational Design Innovation in Technology-Enhanced Learning

Section 3

Mary Fleming, Paul Flynn, Tony Hall, Barry Houlihan, Niall McSweeney

Context

This chapter will present a detailed case study of the Breaking the SEAL (Schools Engagement with Archives through Learning) project, a collaboration between the James Hardiman Library and the School of Education at National University of Ireland (NUI) Galway. The project had varied and achievable stated goals: to engage senior second-level school students with primary archival sources for study and research; develop a pedagogical framework in which to structure a dynamic and collaborative learning environment for the students; embed learning outcomes such as enhanced critical thinking, analytic skills, and digital research capabilities; diversify the user

base of the archives service itself; instill academic writing skills; and develop models to emphasize the impact of quality and experiential educative practices within higher education and academic libraries.

The project was focused on engaging senior second-level students of history. Within the prescribed curriculum, all students must undertake and produce a research study report (RSR). This includes completing original research on an independently chosen topic and producing an extended essay. Breaking the SEAL is the first such project in Ireland to partner archivists, teachers, and educational methodologists with local student groups to facilitate a dedicated experiential learning mode that utilized archival collections within student RSR projects.

In recent scholarship, discussions have arisen about redefining the role and place of archivists and archival collections within societal and cultural frameworks. Louise Craven produces a critical study on such questions and presents a challenging contemporary picture, where the roles of both archives and archivists are undergoing profound re-evaluation within social, political, and epistemological shifts.¹

This question underpins the stated goals of the Breaking the SEAL project. Andrea Johnson notes that contemporary empirical evidence suggests that despite recent “large investment in digital archives, early evaluations have shown that many of these projects have not lived up to their overarching expectation of “access for all.”²

The vital critical skills necessary to conduct academic research were unsupported and underdeveloped within the pre-existing educative model that accompanied the emergence of large-scale digital resources, primarily seen within the last decade. In terms of such underdeveloped processes, Johnson specifically refers to search behavior practices, navigation of large multiformat information sets, and, crucially also, inconsistency in archival metadata that was insufficiently sensitive to educative methodology and needs. These combined factors also predicated the risk of researcher focus being turned to unsubstantiated digital objects, through unstructured archival literacy programs on behalf of both schools and libraries, rather than on scholarly and authentic digital archive material supported by pedagogically based learning practices delivered by an archival repository or third-level library.

Recent projects at NUI Galway have counteracted this negative international trend. Mass-scale projects such as the Abbey Theatre Digital Archive, the world’s largest stand-alone digital theater archive,³ saw dedicated undergraduate and postgraduate modules designed and delivered by faculty of the Centre for Drama, Theatre and Performance as well as by archivists from the Hardiman Library. However, students of second-level education rarely received this type of archival literacy and educative training.

Being a nontraditional user group of and for academic libraries ensures this student group fits the profile as outlined within David W. Lewis’s study *Reimagining the Academic Library* as a cohort that academic libraries must develop new competencies in working with. Lewis recognizes that libraries have an important role to play in the recent reconfiguration of the knowledge ecosystem; managing data, born-digital records, databases, and journals as well as digitized archives and print collections. “If Libraries fail to take on new roles,” Lewis warns, “others will step forward to do so.”⁴ These “new roles” that Lewis predicts must

include new and reactive academic teaching roles devised and delivered by partnerships if and where possible, and delivered through the academic library setting. The library must seize the opportunity to be an active shaper of pedagogical practice where its collections can be utilized to great educative effect, rather than reside as a passive voyeur.

The project also allowed for observations regarding user experience for nontraditional users, users who have not yet entered third level but who will be the incumbent user group as future new entrants to third level, thus moving the library and School of Education into active roles within student recruitment and retention. By analyzing feedback from students at various stages, much vital data was realized regarding the thoughts and experiences of second-level students toward using third-level academic libraries and also specifically primary-sourced archival collections, allowing for early intervention into the transition experience of such users by the time they are registered entrants within the university system.

Rationale and Development

Breaking the SEAL received seed funding from the NUI Galway “EXPLORE” program, an on-campus initiative to support new ideas in staff-student collaboration. Further support from the Hardiman Library and the School of Education provided a solid foundation upon which to structure and devise a Working Advisory Group and solicit a partner school in the locality. Presentation College, Headford, Co. Galway, a second-level school, volunteered to participate and enabled the project codirectors to work directly with an initial class-group of twenty-four students.

Within the Irish higher education sector, recent statistics show an increasing dropout rate among undergraduate students. Among the rationale for this project was to counteract the dominance of rote learning within the Leaving Certificate program as well as learning “merely to beat the points race” that the Irish university entry-level process facilitates. The urgency of this problem has been reported by academics in Irish national media. Dr. Ellen McCabe warned of the paucity of attention placed at second level for students to critically engage with information outside of their prescribed textbook: “The trend for rote-learning dominates almost all areas of the Leaving Cert exam.... In the age of print, understanding the information we consumed as either fact or fiction was relatively easy. In the digital sphere, the fictional and the real sit side-by-side and are frequently interchanged.”⁵

A report released by the Higher Education Authority (HEA) detailing the progression of students within the academic year 2013–14 to 2014–15 shows that 16 percent of new entrants to Level-8 University courses did not progress beyond first year. Its authors state that “despite a continued increase in the number of students entering higher education over recent decades, non-progression rates continue to give cause for concern.”⁶ Further data when broken down by discipline shows that those with the highest respective nonprogression rate of new entrants were construction- and engineering-related courses, those traditionally seen as less frequent users of library services or those with less digital archival literacy skills than, for example, students in the humanities traditionally would be.

The HEA report indicates evidence equating the nonprogression rate to direct links between prior educational attainment upon entry to third level and successful progression after the first year of study within university. The findings state that those students with higher prior educational attainment are more likely to progress to the second year of study than their peers lacking in such learning development. It became evident that direct efforts to improve student ability in terms of transition to third level through competence and skilled confidence in academic writing, digital literacy, archival and library research, and analytics would be of central merit to this project, as well as addressing a prominent national issue for students within the higher education system.

The Breaking the SEAL project also underpins the goals of the Hardiman Library’s strategic plan, *The Journey to 2020*,⁷ in which the strategic plan prioritizes “Connectivity through Partnership, Communication and Community”; “Developing Graduates Who Think Critically and Have Lifelong Learning Skills”; and “Providing Access to Excellent and Relevant Collections.”⁸ These factors provided a tangible rationale to develop the project into a working case study.

Design and Development

Breaking the SEAL consisted of numerous interconnected strands best described as a three-stage process (see figure 25.1). Stage 1 involved the recruitment of schools. Relationships long established between the School of Education and schools in the region were harnessed to recruit suitable participants. The participating student group first spent one full day at NUI Galway. The on-site visit was an essential component of the process as it physically removed the barriers perceived toward third level—exclusive to its own students only, unconnected to the locality, or the preserve of an academic elite present by virtue of class or economic capability. Students were introduced to the archive collections of the Hardiman Library by a tour and introductory workshop by the University Archivist. Following this, the students participated in four bespoke workshops, which were tailored to meet the pedagogical pillars of primary source awareness and identification; analysis and critical thinking through collaboration; and digital information literacies and academic writing. A dedicated workbook was designed to allow students to complete tasks directly in real time related to the RSR project stemming from skills learned at the workshops. In short, a highly scaffolded technology enhanced learning environment was created to support participating students.

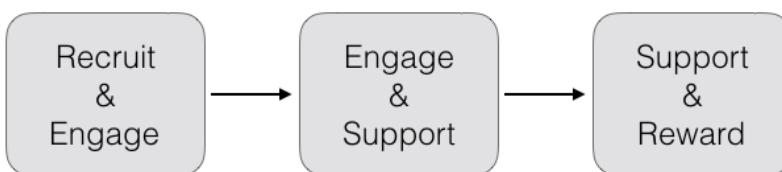


Figure 25.1
Breaking the SEAL stage process of engagement.

Stage 2 involved a follow-up school visit to the group by the project directors. Here students were provided with individual tablet devices allowing for skills and competences to be utilized in electronic word processing, design, digital research, and related essential skills. Detailed instructions were provided to the students with regard to scheduling completable tasks and deliverables for each pedagogically designed activity.

Stage 3 involved each students preparing an individual academic poster for presentation at a later exhibition held at the Hardiman Library, NUI Galway. This exhibition was the culmination of the students' work, and they presented their completed works to their families, friends, and attending academic staff. Also, as part of the exhibition event, each student earned a certificate of participation and a bespoke digital badge (figure 25.2), designed by NUI Galway's Centre for Excellence in Learning and Teaching. (CELT).



Figure 25.2

Bespoke digital badge awarded to participating schools and students.

Communicating Results and Impact

Of the stated goals of the project, three were of particular interest during this iteration of the Breaking the SEAL project:

1. Diversify the user base of the archives service.
2. Develop a pedagogical framework in which to structure a dynamic and collaborative learning environment for participants.
3. Establish a model that emphasizes the impact of quality and experiential educative practices within higher education and academic libraries.

Data was collected from a number of sources, including the work produced by students; engagement with participants' teachers; observations by course directors; video interview with participants' students; and vignettes taken from the awards ceremony. Permission has been granted by all participants to track their progression into higher education and for the impact of their engagement with the Breaking the SEAL project to be situated during their initial experiences with higher education.

Diversifying the User Base of the Archives Service

As stated above, the archives held at the James Hardiman Library at NUI Galway, and also within third-level repositories in general, can sometimes be perceived as a resource that is not for use or not available to second-level students. All of the students who participated in the Breaking the SEAL project stated that this was the first time that they had engaged with primary source material and that they had never been to visit an archive repository. The participating history teacher in this project iteration also indicated that it had been quite some time since he had visited an archival source and later went on to reminisce that he could not remember engaging with the archives during his undergraduate degree or indeed during his teacher-training course.

During their Stage 1 campus visit, students were provided with a tour of the archives by the University Archivist. They were quite taken aback at the access that they had been granted and even more struck by encouragement given by the archivist to physically engage with the primary sources that had been prepared and laid out for them to investigate. A common theme among the student group was best encapsulated by a recorded comment from an individual student: “I couldn’t believe, they were just there and there was no glass... I mean... we could actually hold them and... turn the pages and just hold them.” Another student commented, “After visiting the archive I realized how important primary sources and archives are to encountering history. I felt I had experienced history in a different way after seeing video footage and hand-written diaries. I felt that primary sources should be more accessible to secondary school students. I thoroughly enjoyed my day at NUIG and I feel privileged to have had this opportunity.”

Another common theme that emerged within the students’ group was their perception of the library and how they felt that they were expected to engage not only with materials held by a library but also with the environment of the library. The following comment sums up this perception and perhaps how this view of engaging with a library context had been challenged by the campus visit: “I never thought that about primary sources or libraries really as something that was for me or, I guess, even as a place where I would be welcome... you always feel like you are doing something wrong by making noise of touching something. It was, like... I don’t know... different today.”

The previous comment was echoed throughout the group and is indicative of the challenges faced by academic libraries. However, a key aspect of the Breaking the SEAL program was the follow-up engagement with the students off-site in the second-level school environment. Direct delivery of archival literacies was made possible through on-site access to the Digital Scholarship repository of online digital archives of the Hardiman Library. It was possible to provide remote access on-site to the primary sources that students had previously engaged with during the campus visit. This activity cemented a clear shift in perception among the student group. Democratic access to primary sources, possible through digital means, acts as an agent against perceived class barriers in educational attainment.

Status such as previous family tradition of third-level completion, familiarity with independent learning, or economic means of families to fund third-level education

ensures a certain group of school leavers will not obtain the opportunity to engage with academic libraries and research, or among those that do, there is a significant percentage who are ill-equipped with relevant skills to progress past the first year of study.

Analysis of grant figures awarded to students from the state to defray third-level costs indicate an identifiable link to class, economics, and family tradition and entrance to third level. Universities outside of Dublin recorded student populations of between 37 percent and 52 percent of students in receipt of state grants. University College Dublin was lowest at 27 percent, with Trinity College Dublin at 28 percent. Regional institutes of technology peaked remarkably higher, primarily between 60 percent and 74 percent.⁹ Breaking the SEAL, therefore, was deliberately focused on inculcating democratic access to archival learning beyond and through any perceived class barriers and diversifying the user base of academic libraries. As one student commented: “I felt like the Archives were for people who were studying history at college but when you think about it, they are for everybody... it was really interesting and I could touch it with my hands but then when we left I thought ‘*that’s it, all over now*’. But really,... now I think that I have more of an interest because the same sources are available to me here in my school or at home when I have Wifi... my dad even had a look.”

These brief snippets from a rich qualitative data set clearly indicate a mind shift in relation to the how potential users of our resource view not only the archives, but also the way libraries engage with communities. They also suggest that there is a domino effect at play where accessibility is communicated beyond the initial primary user interaction. This is an aspect of the program that perhaps could be developed further in the years to come. However, at this stage of the development of the project, our data indicates that we have strong movement toward diversifying the user base of the archives service of the James Hardiman Library at NUI Galway.

Developing a Pedagogical Framework for Participants

A core component of the Breaking the SEAL project is the relationship between the James Hardiman Library and the School of Education. Initial conversations were centered around four key assets of educational engagement with the archival content: collaboration; critical engagement with content and others; narrative construction or academic writing skills development; and engagement with the archives through a technology-enhanced learning experience. These key twenty-first-century skills were then embedded into the design workshops to maximize the educational experience of the participants and to scaffold the engagement of students with the archives both on and off campus.

Inspired by social constructivist learning theory, an important element of the successful engagement of students with the project and a core scaffold of the program is the workbook issued to students during their visit to campus in Stage 1. This workbook acts as a guide for the students and a touchstone for all of the activities that they engage in during the project. It is the first publication of its kind and was referred to by history teachers consulted in the process of writing the booklet as a significant development in enhancing the learning experience of senior cycle history students.

Another core component of the pedagogical framework, again in keeping with social constructivist origins of the designed learning experience, was the selection of primary sources made available to students throughout their participation in the project. The embedded Vygotskian principle of the zone of proximal development is further evident in relation to the digital access of the selected sources. This ensured that the supportive environment within which the campus visit was conducted was extended out beyond the wall of the university and into the domain of the students both in school and at home. This aspect of the project is an innovative development and only now possible with particular developments in mobile technologies. Ultimately diversifying the user base of the archives, while predicated upon an initial physical engagement with the primary sources, is grounded upon a pedagogical view of engagement as a concept that builds a bridge between the physical artifact and the world of an increasingly digital and mobile learning space.

Establishing a Model for Use in Higher Education and Academic Libraries

The model of engagement used in the Breaking the SEAL project is based on PhD research carried out in NUI Galway. This research employed a design-based research (DBR) methodology that ensured that its output was in the form of an adaptable and adoptable model. This DBR model is called TWO-CENTs or Transition With Others through Collaboration, Engagement, Narrative construction and the development of Technological skills.¹⁰ The transferability of this model is evident in the output of the Breaking the SEAL, where students who engage with the library support services experience issues similar to those addressed in the model both at second-level education and upon entry into third-level institutions. Building on this baseline model and the success of the program, we have refined the mechanisms within the Breaking the SEAL program so that the program, in and of itself, is an adaptable and adoptable program.

Impact and Communication

The impacts and findings of the Breaking the SEAL project were communicated through local, national, and international professional and academic networks, as well as within local communities. The project was recognized nationally by receiving the 2016 Teaching and Learning award issued by CONUL (the Consortium of National and University Libraries [of Ireland]). This peer-reviewed competitive process was judged by leading national scholars in the Irish higher education and information science fields. The award citation stated that

from a strategic perspective, the ideas of community engagement, public service and outreach beyond the academy have become important issues for academic institutions... from a pedagogical perspective, the programme has two valuable outcomes: it provides Leaving Certificate students with an opportunity to develop and demonstrate critical

thinking, information and digital literacy skills and research skills as well as bridging the gap, physically and pedagogically, between second and third level education... from a political point of view, we felt that the programme ties in with current national strategic focus on digital enhancement—in particular, the Digital Badge as a tool for incentivising the students is highly innovative.¹¹

Breaking the SEAL was also been nominated in the Irish Education Awards 2017, in the category of Best Outreach Project, recognizing its importance and impact within the field of education nationally. The project codirectors, Flynn and Houlihan, will present findings at the CSCL International conference, to be held in Philadelphia in June 2017, offering an opportunity to share project findings with an international community specializing in computer- and technology-enabled teaching and learning.

The impact of this peer recognition for the library, the School of Education, and the university has been critical to the positive reception to the project. It has enabled and secured funding for Phase 2 of the project, enabling a wider and more diverse body of project participants be engaged.

Leveraging the Findings

The project findings outlined in the above sections clearly indicate the success of the project in three distinct areas. The user base of the library archives has been extended and has the potential to grow into a national engagement with the RSR project framework. Notably, the knock-on effect of participation in the project to family members provides further opportunities to interest students in archives that are related to their locality. It is certain that the pedagogical framework supported student engagement throughout the project and that the output of the project is an adoptable and adaptable model that can be used in higher education institutions and academic libraries regardless of local constraints. It is the intention of the authors to widen the participation of students initially to a larger regional level and subsequently a national level.

We maintain that the target audience of our initial expansion period should be senior cycle students. However, opportunities exist for lateral expansion within this cohort into cognate subject groupings at second-level education. Subjects such as geography also have compulsory continuous assessment projects that could be supported and enhanced through access to the archives and library content.

A second and critical reason for expanding the project within this cohort is the ability of the project to effect change with respect to student retention rates and initial entry to undergraduate education. Reasons for dropping out include academic pressures such as collaborative projects, difficulty with critical engagement with content, academic writing, and the technological demands of third-level education, which, in the Republic of Ireland, are markedly different from those of the high-stakes examination processes at second-level education.

Reflections

The Breaking the SEAL project has realized many stated goals for participants both on and off campus. In developing this project, the authors have reacted and responded to numerous components that necessitated thoughtful and considered reflection.

Graduate Attributes and Skill Sets

By actively adhering to and reacting to the university's stated strategic learning goals for its students, among them the provision of lifelong, flexible, and transferrable graduate attributes, such as digital literacies, academic skills, collaborative teamwork, and academic writing ability, the project was successful in this regard.

The library's mission plan, as stated within *Library Strategy: The Journey to 2020*, recognizes contemporary changes in the volume of information now instantly available, afforded by technological access, has also attributed to re-evaluation of both Archive usage trends and of user experience. *Library Strategy* states, "These changes have transformed the way in which universities and their libraries operate and have created new needs and expectations,"¹² noting the need to adapt and be flexible in order to meet the demanding and varied user expectations.

This is in direct correlation with the mission of NUI Galway's own strategic plan, *Vision 2020*, which makes clear its commitment to excellence not only in teaching and research but also in personal development: "We aim to educate students who, as graduates, will demonstrate a capacity for independent critical thinking, creativity and innovation, dynamic teamwork, socially responsible leadership, and a commitment to lifelong learning."¹³

Partnerships

The collated and diverse range of skill sets from across the body of project partners was a vital attribute to the overall success. Partnership between the School of Education, the Hardiman Library, and the Centre for Excellence in Learning and Teaching (CELT), as well as with the respective secondary schools, ensured a dynamic working group of committed and ambitious experts, who stringently worked to drive the pedagogical and learning frameworks of the project. The shared skill sets and common ambition were critical to the success of the project.

Student Retention at Third Level

Research conducted at a range of American universities foregrounds the importance of academic libraries as predictors of student retention. Murray, Ireland, and Hackathorn collate from similar research that, although universities expect academic libraries to be active contributors to the institutional operation in attracting and retaining students, they seldom offer academic libraries any guidance or support on such practices. First-year engagement is noted as being particularly critical to student satisfaction levels and

thus impacting on departure decisions.¹⁴ NUI Galway states in its strategic plan, *Vision 2020*, its intention to maintain its retention rate of 84 percent.¹⁵ As retention is indelibly linked to positive student experience and learning, a pre-emptive intervention in the provision of academic, archival, and information literacy skills offered prior to entry at third level supports the university agenda of providing quality, relevant, and motivating teaching and learning; this has now been critically devised and deliverable through Breaking the SEAL

Challenges

The project was certainly not without its challenges. For an archive service traditionally tuned to working with established academic researchers, postgraduate students as well as undergraduates, the tone and level at which to pitch and devise the educative program required continuous monitoring. Seed funding was secured for the initiation of the project and offered welcome but finite resources with which to build and develop bespoke learning programs, packs, and literature. More cost-effective means of delivering the project were needed, and it would be favorably disposed to expanded digital outputs, thus reducing print and related costs.

Impact and Value

The project demonstrated clear and identifiable impacts and return on investment for all parties. The project succeeding in creating advanced skill sets among the project working group in the increasingly important area of academic skills that are offered through academic libraries. The value of this was facilitated through the structured methodological input from education professionals and curatorial expertise of archivists, providing a pioneering learning project. The project was virtually financially cost-neutral to the respective project departments owing to the competitively won seed funding. Institutional reputation for excellence was further built on for the university as well as through peer-judged national awards in teaching and learning, placing the role of libraries firmly within the educative spectrum as active and vital participants.

The project had a clear positive impact on the participants. The students displayed maturity, academic rigor, independent initiative, and passion for their subject and the project. It allowed a generation of history students to engage with primary sources in a professional third-level setting in an otherwise unprecedented manner. Digital technology has created new possibilities for the representation and use of archives. Crucially, it has lasting and measurable impacts for all partners and has a been proven success in delivering achievable dynamic learning for nontraditional users of archives within second-level education.

Notes

1. Louise Craven, "Introduction," in *What Are Archives?* ed. Louise Craven (Surrey, UK: Ashgate, 2008), 1.

2. Andrea Johnson, “Users Use and Context: Supporting Interaction between Users and Digital Archives,” in *What Are Archives? Cultural and Theoretical Perspectives: A Reader*, ed. Louise Craven (Surrey, UK: Ashgate, 2008), 145.
3. The Abbey Theatre Digital Archive is the archive of Ireland’s national theater, the Abbey Theatre, 1904–2007, comprising over one million individual multimedia archival objects. (The Abbey Theatre Digital Archive, National University of Ireland, Galway, accessed February 9, 2018, <http://library.nuigalway.ie/collections/archives/depositedcollections/featuredcollections/abbeytheatre-digitalarchive/>.)
4. David W. Lewis, *Reimagining the Academic Library* (Lanham, MD: Rowman and Littlefield, 2016), xvii.
5. Ellen McCabe, “Leaving Cert Fails to Equip Young People for a Post-truth World,” *Irish Times*, February 21, 2017, <http://www.irishtimes.com/news/education/leaving-cert-fails-to-equip-young-people-for-a-post-truth-world-1.2976698>.
6. Denise Frawley, Victor Pigott, and Dawn Carroll, *A Study of Progression in Higher Education 2013/14 to 2014/15* (Dublin: Higher Education Authority, March 2017), 9, <http://hea.ie/assets/uploads/2017/06/A-STUDY-OF-PROGRESSION-IN-IRISH-HIGHER-EDUCATION.pdf>.
7. *Library Strategy: The Journey to 2020*, (Galway: James Hardiman Library, NUI Galway, n.d.), 8–12, accessed May 13, 2017, <http://library.nuigalway.ie/media/jameshardimanlibrary/Library-Strategy--The-Journey-to-2020.pdf>.
8. Frawley, Pigott and Carroll, *A Study of Progression*, 19.
9. Carl O’Brien, “New Figures Expose Class Divide in Higher Education,” *Irish Times*, February 7, 2017, <http://www.irishtimes.com/news/education/new-figures-expose-class-divide-in-higher-education-1.2965895>.
10. Paul Flynn, “Exploring the History of Education: Designing for Transition into Undergraduate Initial Teacher Education and towards Professionalism,” in *Transforming Learning, Empowering Learners: The International Conference of the Learning Sciences 2016*, ed. Chee-Kit Looi, Joseph Polman, Ulrike Cress, and Peter Reimann (Singapore: International Society of the Learning Sciences, 2016), 1397–98.
11. Clare McGing, Award Citation, CONUL Teaching and Learning National Seminar, held at Science Gallery, Trinity College Dublin, November 16, 2016.
12. *Library Strategy*, 4.
13. *Vision 2020: NUI Galway Strategic Plan 2015–2020* (Galway: National University of Ireland, Galway, n.d.) accessed May 13, 2017, 23, <https://www.nuigalway.ie/media/nuigalwayie/content/files/aboutus/Vision2020-NUI-Galway-Strategic-Plan-Web.pdf>.
14. Adam Murray, Ashley Ireland, and Jana Hackathorn, “The Value of Academic Libraries: Library Services as a Predictor of Student Retention,” *College and Research Libraries* 77, no. 5 (September 2016): 632.
15. *Vision 2020*, 25.

Bibliography

- Craven, Louise. “Introduction.” In *What Are Archives? Cultural and Theoretical Perspectives: A Reader*. Edited by Louise Craven, 1–3. Surrey, UK: Ashgate, 2008.
- Flynn, Paul. “Exploring the History of Education: Designing for Transition into Undergraduate Initial Teacher Education and towards Professionalism.” In *Transforming Learning, Empowering Learners: The International Conference of the Learning Sciences (ICLS) 2016*, vol. 2. Edited by Chee-Kit Looi, Joseph Polman, Ulrike Cress, and Peter Reimann, 1397–98. Singapore: International Society of the Learning Sciences, 2016.
- Frawley, Denise, Victor Pigott, and Dawn Carroll. *A Study of Progression in Irish Higher Education: 2013/14 to 2014/15*. Dublin: Higher Education Authority, March 2017. <http://hea.ie/assets/uploads/2017/06/A-STUDY-OF-PROGRESSION-IN-IRISH-HIGHER-EDUCATION.pdf>.
- Johnson, Andrea. “Users Use and Context: Supporting Interaction between Users and Digital Archives.” In *What Are Archives? Cultural and Theoretical Perspectives: A Reader*. Edited by Louise Craven, 145–166. Surrey, UK: Ashgate, 2008.

- Lewis, David. *Reimagining the Academic Library*. Lanham, MD: Rowman and Littlefield, 2016.
- McCabe, Ellen. "Leaving Cert Fails to Equip Young People for a Post-truth World." *Irish Times*, February 21, 2017. <http://www.irishtimes.com/news/education/leaving-cert-fails-to-equip-young-people-for-a-post-truth-world-1.2976698>.
- McGing, Clare. Award Citation, CONUL Teaching and Learning National Seminar. Held at Science Gallery, Trinity College Dublin, November 16, 2016.
- Murray, Adam, Ashley Ireland, and Jana Hackathorn, "The Value of Academic Libraries: Library Services as a Predictor of Student Retention." *College and Research Libraries* 77, no. 5 (September 2016): 631–42.
- National University of Ireland, Galway. The Abbey Theatre Digital Archive. Accessed February 9, 2018. <http://library.nuigalway.ie/collections/archives/depositedcollections/featuredcollections/abbeytheatredigitalarchive/>.
- . *Library Strategy: The Journey to 2020*. Galway: James Hardiman Library, National University of Ireland, Galway, n.d. Accessed May 13, 2017. <http://library.nuigalway.ie/media/jameshardiman-library/Library-Strategy---The-Journey-to-2020.pdf>.
- . *Vision 2020: NUI Galway Strategic Plan 2015–2020*. Galway: National University of Ireland, Galway, n.d. Accessed May 13, 2017. <https://www.nuigalway.ie/media/nuigalwayie/content/files/aboutus/Vision2020-NUI-Galway-Strategic-Plan-Web.pdf>.
- O'Brien, Carl. "New Figures Expose Class Divide in Higher Education." *Irish Times*, February 7, 2017. <http://www.irishtimes.com/news/education/new-figures-expose-class-divide-in-higher-education-1.2965895>.