Chapter 30

Connecting the Real Estate Industry and Library Instruction:

A Geospatial Example of Experiential Learning

Scott St Martin, Amanda Belantara, and Daniel Hickey

Introduction

The Public Private Development course at NYU's Schack Institute of Real Estate offers graduate students an engaging field-based learning opportunity. In this course, students respond to requests for proposals (RFPs) issued by local city and state agencies, such as the New York City Economic Development Corporation (EDC) and New York State's Empire State Development (ESD). Their final proposals include sections on organizational structure, financial analysis, and economic impact. The library instruction session outlined in this chapter addresses the economic impact section via mapping tools and community reports that are valuable for real estate development research. During the session, students generate insights into communities, gain practical skills to add to their résumés, and critically examine the limitations of standard real estate market research. Students in graduate real estate degree programs are expected to demonstrate varied competencies and abilities, including understanding market cycles, preparing materials for presenting to zoning boards and other government officials, and determining the feasibility of development projects.[1] The learning objectives of the Public Private Development course include understanding the risks and rewards of development partnerships, learning more about stakeholders from

the government and the community, and developing an awareness of the different types of public development projects, such as waterfront redevelopment, transit-oriented development, and inner-city revitalization. In preparation for their final proposals, students review other significant development case studies, such as Hudson Yards, Atlantic Yards, or Amazon HQ2, to understand the community impact of large, mixed-use, public-private proposals.

In alignment with course learning objectives, the librarian teaches students how they can use library resources such as SimplyAnalytics, PolicyMap, and ArcGIS Business Analyst for applied real estate development projects. Each of these resources goes beyond simple access to census data to include proprietary information on consumer spending, quality of life, and housing. Customized maps, tables, and reports enriched by third-party data enhance researchers' proposals to best serve communities. By leading an active learning session centered on using mapping resources to inform real estate market analyses, the librarian communicates the value of these tools for students' coursework and careers. The authors of *Real Estate and GIS* advocate for more collaboration and learning between these academic fields: the "majority of real estate information has some aspect of spatial dimension, GIS outputs can be tailor-made to suit most situations, and an improved understanding of GIS and a property's location directly results in better knowledge about a specific property."[2] This sentiment reflects the reality that the real estate industry relies heavily on GIS tools.

The Public Private Development course is an example of field-based learning (FBL), a form of experiential learning in which students develop "recommendations for solutions to a sponsoring company or organization's real problems."[3] As in many other field-based learning courses, invited external experts are a central component of the curriculum. Following this model, the librarian provides specialized research expertise as a visiting lecturer. With a goal of fostering trust from real estate students, the librarian also serves as a research consultant. Librarians have found that students in applied programs are more inclined to reach out to librarians for help when they are rebranded as consultants since working with consultants is a common practice in industry.[4]

Planning

Number of participants

15 students, working individually or in small groups on market analysis and project proposals

Audience

This lesson has been designed for graduate real estate students who have completed foundational courses, preparing them with an understanding of real estate markets and industry terms. This particular session is tailored to mixed-use residential projects in the New York metro area. Librarians can adapt this session by working with teaching faculty to identify resources for assignments in different market areas.

Preparation and Resources

Preparation

Allow 1–2 hours of preparation to consult with the instructor and review the syllabus and assignments. Ask the instructor if any individuals have any accessibility needs. The

librarian must also create ESRI's ArcGIS Online Business Analyst accounts beforehand to provision access to the class.

Using the insights provided by the conversation with the faculty member, the librarian can review recent development case studies and RFPs (found on city and state agency sites) to become familiar with relevant metrics. For most market areas, there will only be a handful of active RFPs that will be suitable for students to address with their proposals. The librarian benefits from monitoring trade publications and newspapers (i.e., *The Real Deal*, *Commercial Observer*, *Crain's New York Business*) that cover the markets in which their faculty and researchers are active.

Resources

- Mapping resources: main focus
  - ESRI ArcGIS Online Business Analyst (https://bao.arcgis.com/esriBAO/)
  - SimplyAnalytics (https://simplyanalytics.com/)
  - PolicyMap (https://www.policymap.com/)
- Optional mapping resources
  - Social Explorer (https://www.socialexplorer.com/)
  - Reference USA (https://www.referenceusa.com/)
- Other paid subscription resources presented in class
  - Zoning Handbook from New York City Department of City Planning (print)
  - PropertyShark (online) (https://www.propertyshark.com/mason/)
  - Business literature databases (online): Business Source Complete; ABI/Inform; Factiva
- Free resources are also discussed as they relate to real estate market analysis for New York City, such as the Community District Profiles from the Department of City Planning. Links can be found on the NYU Libraries Real Estate Research Guide.[5]

Description of Lesson/Activity

Goals, learning outcomes

The overarching goal of this session is to further the concept of scholarship as conversation, as defined in the ACRL *Framework for Information Literacy for Higher Education*. By engaging students in conversations through active demonstrations of specialized resources, the librarian aims to foster a research partnership and inspire sustained student use of tools in their careers. The following learning objectives offer opportunities to address three ACRL frames:

Learning Goal	ACRL Frame
• Define market areas to generate granular insights into communities. • Perceive bias in industry-generated statistics and market reports, and gaps as pertain to social justice. • Leverage information and data beyond these reports in order to create holistic insights.	Authority is Constructed and Contextual

Learning Goal	ACRL Frame
• Align subscription information and data resources with deliverables and tailor presentations for real-world stakeholders.	Information Has Value
• Evaluate data sources in order to differentiate historical data and forecasted projections. • Discuss the importance of using consistent data points and metrics, and how to incorporate them appropriately.	Research as Inquiry

Time required

The librarian is allocated one hour during class time. Students are encouraged to schedule individual or group consultations with the librarian outside of class to explore different resources or dig deeper for specific metrics or data points.

Teaching Outline

Much of the session is dedicated to a lecture-style demonstration that highlights how students can expertly use library resources for real estate research. To promote active learning, the librarian encourages the students to follow along on their own devices during the demonstration, initiating conversations around how to interpret and apply the data and reports generated from the geospatial tools.

A. Introductions and Overview of the Real Estate Research Guide (5–10 minutes)

The session begins with brief introductions and a discussion of students' projects, followed by an overview of how the guide has been constructed to reflect the nature of real estate research and how real-world industry information and data are organized.

B. Demonstration of Mapping Resources (30–35 minutes)

The librarian initiates the demonstration by visualizing a shared variable found in each platform, such as median household income. Mapping the same variable across the three resources allows for a discussion about basic functionality. Each resource enables researchers to navigate the map area, select and visualize the variable, adjust the geographic level, edit the color scheme, customize the data ranges, and utilize multiple export options. Next, librarians can point out the fact that even though each resource uses the same sources (such as the decennial US Census and annual American Community Survey), they each present the same metrics differently. Through examining the resources, the class quickly understands that they must pay close attention to these details in order to produce accurate maps and charts and speak knowledgeably with clients. The session demonstrates the real-world usefulness for understanding the differences between historical and forecasted data, varying geographic boundaries, and the value-added uniqueness of certain datasets that each resource supplies. Following this discussion, the librarian walks through relevant, unique functionality in each of the mapping resources:

ArcGIS Business Analyst
- Defining a market area using specific locations (ring maps), standard geographies (i.e., zip codes, census tracts, cities, counties), and user-created polygons
- Generating and exporting reports and infographics for defined market areas
- Using the Tapestry Segmentation area profiles to go beyond demographic and economic data to provide socioeconomic profiles of sections of the populations in students' project areas
- Progressing to comparison reports and customized reports and utilizing the suitability and void analysis tools

SimplyAnalytics
- Building comparison reports with relevant variables and multiple locations, at different geographic levels (comparing city to city, city to county to state, etc.)
- Finding variables across different years, searching and browsing across data categories
- Highlighting the employment, income, housing, retail, business count, and consumer behavior data categories
- Demonstrating the ranking option to sort market areas by relevant variables; identifying development and community improvement opportunities

PolicyMap
- Discussing the ability to map unique data points (cultural institutions, parks, amenities) over data layers to identify opportunities for addressing gaps with components of new development proposals
- Highlighting high-value data categories (housing, lending, quality of life, and economy) and variables therein (housing sales data from Zillow, FFIEC loan data, and social vulnerability and health data)

C. Overview of Supplementary Resources (15–20 minutes)

Returning to the real estate research guide, the librarian demonstrates how to access and incorporate additional data, market reports, government resources, and news articles into their analysis, informed by the outputs generated from the mapping resources.

Reference USA
- As a complimentary resource to the mapping platforms, ReferenceUSA allows students to generate lists of businesses, sortable by business type, name, size, and more for identifying competitor lists for retail projects or marketable amenities close to a residential project.
- Data extracts from ReferenceUSA can be uploaded to all of the above platforms.

Residential and commercial market reports
In displaying a sample market report, the librarian can initiate critical discussion about
- how firms define submarkets outside of standard geographic boundaries;
- how the supply and demand metrics found in these reports provide insights into economic activity different from that found in the mapping resources; and
- why some companies provide maps defining their market boundaries with limited definitional and methodological guidance.

Government and public agencies
This session should also include an overview of finding public data and reports useful for understanding community needs and conducting market analyses. While there are a variety of public sources for financial documents, tax information, and environmental assessments, the Department of City Planning's Community District Profiles are key documents. Each profile includes an annual Statement of Community District Needs, authored by community boards, highlighting gaps in cultural, educational, health, and transit infrastructure. In comparing these documents and reports to the outputs extracted from mapping platforms, the librarian initiates conversations around informed analysis of ways to invest in and improve communities.

News and business literature databases
By demonstrating how to search for articles in databases like Factiva, Business Source Complete, and ABI/Inform, the librarian aims to show students how to
- find analysis, support, and criticism of previous and planned developments;
- search for coverage of failed projects, ranging from recent (Amazon's failed headquarters in Long Island City) to historical (the NFL stadium on the west side of Manhattan); and
- apply knowledge gained from demographic and economic analysis to issues and criticisms found in news and trade journals in their proposals.

Engagement

During the demonstrations, the librarian encourages students to look for, map, and discuss variables relevant to their project proposals, reminding them to consider how certain metrics can be used in a market analysis. For example, monthly and quarterly housing starts in PolicyMap can inform supply-and-demand analyses; retail spending data in SimplyAnalytics might prove useful for projects incorporating stores; and the behavioral and market potential data in ArcGIS Business Analyst provide background on a community's existing network of residents, consumers, and businesses.

Students are empowered to consider their particular proposals and the corresponding data points that will best inform the narrative cases they are building. While students might use one or two of the main mapping tools most intensively, an understanding of the unique features in each is critical for addressing gaps in their proposal to create a more holistic analysis. Concluding the session, the librarian encourages students to follow up in person, over email, or virtually as individuals or in groups.

Transferability

Substitute databases

This class is reliant upon the use of ArcGIS Business Analyst, SimplyAnalytics, and PolicyMap. Librarians without access to these resources may be able to use open data portals maintained by local (city, county, or state) agencies. In addition, librarians can identify local organizations that provide coverage of data points with mapping capabilities. For instance, in New York City, the NYU Furman Center for Real Estate and Urban Policy maintains a data and mapping tool, CoreData.nyc, which is free and open to the public.

Ability to transfer online or in-person

Geospatial tools have evolved from programs requiring dedicated high-performance terminals to more convenient online products, facilitating the ability to offer this class fully online. In-person instruction permits students to follow along on their own devices, which is not easily replicable in an online meeting. Engaging with the resources can be challenging while simultaneously watching a demonstration on a single screen. Hardware and software compatibility issues, while more easily managed in a library classroom, become exacerbated when students are using their own devices remotely.

In terms of pedagogy, online discussions and active learning often require more effort from an instructor in an online environment, despite the sophisticated functionality of meeting software. To make the best use of class time, instructors may consider employing the concept of a flipped classroom to familiarize students before the session with vendor-supplied tutorials for the mapping platforms. Recording sessions for students to return to later for clarification, or creating brief videos to demonstrate common tasks, could serve to remind students of core functionality at their point of need, rather than requiring follow-up with the librarian. Instructors should plan to experiment with established and emergent best practices for student engagement in a remote environment, just as they have with in-person instruction.

As with all live demonstrations of data visualization tools, it is also important to consider accessibility issues for different user groups. It is good practice to have a complimentary slide presentation with screen captures or provide a transcribed recording of a session. Offering to meet separately to review resources is an additional solution for students who may be unwilling to disclose the need for an accommodation in front of their peers but may feel comfortable doing so one-on-one.

Different class sizes and audiences

The assumption of certain competencies relating to market analysis and property information is built into the session described in this chapter. This graduate-level, highly targeted instruction-as-consultation can be modified for non-experiential learning audiences. A discussion of core real estate concepts could be expanded and the demonstrated resources streamlined to accommodate less complex assignments. Alternatively, the combination of deliverable-focused lecture, active learning demonstration, and in-depth consultation can be re-deployed for other experiential learning classes or programs, such as consulting. Geospatial tools are cross-disciplinary. Students in public health, urban planning, public policy, journalism, and beyond can benefit from introductions to these same resources, with an emphasis on elements relevant to different coursework and research project outputs.

Endnotes

1. Joseph Randall Nicholson, "Measurements in Real Estate Academia: Internal Assessment of Learning," *Journal of Real Estate Practice and Education* 21, no. 1 (2018): 18, https://doi.org/10.1080/10835547.2018.1209177 5.
2. Richard Reed and Chris Pettit, *Real Estate and GIS* (Milton Park, UK: Routledge, 2019), 3, https://doi.org/10.1201/9781315642789.
3. Ann Cullen, "Developing 21st century business leaders through practice: The organizational dynamics and role of librarians and other facilitators of experiential field-based learning in US MBA education" (PhD diss., Simmons University, 2017), 1.

4. J. P. Huffman, "What's in a Name? Rebranding Librarianship for Professional Students," *Journal of Business & Finance Librarianship* 20, no. 3 (2015): 222, https://doi.org/10.1080/08963568.2015.1044373.

5. Scott St Martin, "Real Estate Research Guide: New York City Real Estate," accessed December 7, 2020, https://guides.nyu.edu/realestate/newyorkcity.

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