

Expanding Opportunities of Academic Collaboration between Librarians and Experiential Field-based Learning (FBL) Courses

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Abstract

Today most Masters of Business Administration (MBA) degree programs in business schools include experiential field-based learning (FBL) courses. The foci of FBL courses are consulting projects in which students work outside the classroom to develop recommendations for solving a real business problem posed by a company or organization. This exploratory study will present the findings of how business librarians are working with these courses.

The data for this research was collected from an online survey of business librarians at the top 50 MBA programs in the United States based on the *US News & World Report* ranking and received responses from 36 programs. In addition, data were collected via interviews at six of these institutions. Numerous studies in the business literature have found that managers need guidance in contending with information overload. In particular, there is a need for managers to develop skills in identifying and filtering relevant information from the abundance that is available. Experiential field-based learning projects offer a way to practice and develop these information-related skills by working on real projects. Studies on the involvement of librarians with FBL courses in MBA programs to support the development of information skills and provide research support have been limited to case studies of single institutions. These studies have not provided a comparative analysis of FBL courses at different institutions and the librarians working with them. This paper will present the findings from this research on how the librarians at these business schools are partnering with FBL courses for student success.

Introduction

Baker and Schomberg (2003) define a field study as “a for-credit course or project where a small team of MBA students conducts a consulting-type study, for a business or other organization” (p. 35). The outcome of this experiential learning, which also goes by other names such as “project-based learning” and “action-based learning,” requires the production of a final report or a presentation to the sponsoring organization (DeFillippi & Milter, 2009). This form of learning has been available as an elective course for some time in a number of MBA programs (Corey, 1990). More recently, there has been an increase in these courses not only as an elective but also as a required component of the MBA curriculum (Rynes & Bartunek, 2013).

A considerable amount of ambiguity and uncertainty surround field-based projects. Student teams rely on support roles that include teaching assistants, practitioners, alumni, and librarians who help them understand and work on the business problem they have been asked to investigate. This is a key distinction of this instruction. Instead of leading the instruction, the professor, with the help of others, works in a coaching role to facilitate learning (Datar, Garvin & Cullen, 2010; Skipton & Cooper, 2012).

The data reviewed in this paper examines the types of support provided by business librarians to experiential field-based learning courses at U.S. two-year MBA programs. Two-year, full-time MBA programs were targeted because they represent the most typical, established format for this type of degree in the United States (Hay, 2013; Khurana, 2007). Previous studies have not provided a comparative analysis of business librarian support of FBL courses at different institutions offering only single case studies.

Literature Review

This literature review covers three themes relevant to this study: 1) the need for information gathering and evaluation skills in business education, 2) the pervasiveness of experiential FBL in the MBA curriculum and 3) current librarian activities to provide instruction and information gathering support in business schools.

NEED FOR INFORMATION SKILLS DEVELOPMENT

In view of the challenges faced by business professionals in effectively using information (Case & Given, 2016; Abels & Klein, 2008) it is not surprising that discourse on the reform of the business education curriculum has included the need for students to develop information gathering skills (Boyatzis, Cowen, & Kolb, 1995; Datar et. al, 2010; Dacko, 2006; de Onzono, 2011; Glen, Suci, & Baughn, 2014; Navarro, 2008). These studies include these skills as a component of the problem solving and critical thinking abilities that business students need to develop. In addition, there has been a growing amount of research that supports the benefits of teaching evidence-based decision making in the business school classroom (Erez & Grant, 2014; Rousseau & McCarthy, 2007). Developing the information gathering skills of business students has also been specifically addressed by some management educators (Castleberry, 2001;

Gilinsky & Robison, 2008; Gunasekara, 2008; Hawes, 1994; Hilliger & Roberts, 2001; Julien, Detlor, & Serenko, 2013; O'Connor, 2008).

In describing the characteristics of full-time MBA students, Garvin (2007) stated that the students are "...typically in their mid-to-late 20s, with three to five years of business experience. Most of that work experience has been in relatively low-level positions, such as analyst, associate, or individual contributor roles. Most MBAs have had limited exposure to the realities of organizations and management practice" (p. 369). Although this description is from 2007, it is an accurate description for today (Stainburn, 2014). The most common MBA program format is the two-year, full-time program, where students will normally participate in a paid internship at a company in the summer in between school years. However, it is worth noting that other options for these students are available and are increasing every day given the popularity of this degree (Hay, 2013; Stainburn, 2014).

The book, *Rethinking the MBA* (Datar et al., 2010), surveys current practice at many of the top business schools and offers an extensive review of recent discussions about the need for changes in the MBA curriculum. In the area of developing skills to effectively gather information for decision making, the authors observed that:

MBAs are not good at seeing around the corner or detecting discontinuities. They need to learn how to collect information – how to cultivate and develop great sources, to find the expert wheel-maker and learn from him. (p. 97)

FBL IN MBA CURRICULUM

There has been much debate at many educational institutions that offer MBA degrees about the best approach for preparing today's students for the 21st century information-rich workplace. Many have raised concerns that MBA programs over emphasize a rational-analytic approach and are not providing the practical skills graduates need such as identifying and gathering information to gain insight in unfamiliar areas (Bennis & O'Toole, 2005; Ghoshal, 2005; Khurana, 2007; Mintzberg, 2004; Pfeffer, 2007; Thomas, Lorange & Sheth, 2013).

Business schools overemphasis on rational analytics in teaching and research has come at the expense of the practical, yet open-ended issues that managers regularly encounter... The analytic approach may lead one to overweight knowledge based on available data that can be readily analyzed, blinding one to other perspectives. (Glen et al., 2014, p. 655)

While such critiques are not new (Cheit, 1985; Hayes & Abernathy, 1980), a number of programs have recently implemented major changes that range from completely overhauling the curriculum to initiating new types of courses and immersive activities (Datar et al., 2010; GMAC, 2013). One study (Thomas, Thomas, & Wilson, 2012), sponsored by the European Foundation for Management Development (EFMD), summarizes the problem with the MBA curriculum: "Overall, the evidence implies that a lack of focus on practice, teaching in silos with no integration, and a focus on rational managerial behavior and academic research, all reduce the effectiveness of management education in teaching the art of managing" (p. 18).

Datar, Garvin, and Cullen (2010) ascertain that one of the key concerns -- in addition to more global perspectives and an emphasis on leadership and ethics -- of formal business education programs in universities is “how to balance the demands of scholarship and practice” (p. 75). They define this as a gap in “being and doing” vs. the “knowing” of management, and identify experiential learning as a way to address this issue. “Experiential learning offers a special opportunity to narrow the knowing-doing gap. It provides a uniquely different dimension to business education by giving students the chance to define and scope problems, test ideas in practice, recognize the constraints placed by organizational realities, think innovatively, and recognize the need to reconcile multi-disciplinary and sometimes conflicting perspectives” (p. 157).

Experiential learning theory has a long tradition (DeFillippi, 2001; Kolb & Kolb, 2005). This type of learning has also been cited in the literature by other names such as field-based learning or practice-based learning (Randolph & Nielsen, 2008), project-based learning (DeFillippi, 2001) or action-based learning (Revans, 1983). This type of pedagogy offers a way for students to practice their problem solving abilities, which is a competency that research indicates is highly valued by employers:

Executives and recruiters are critical of MBA graduates for their limited understanding of organizational realities and underdeveloped execution and implementation skills... The enthusiasm for experiential learning in MBA programs comes from deans, faculty and executives increasingly recognizing that critical aspects of managing and leading are learned most effectively through practice rather than through traditional classroom based pedagogies. (Datar et al., 2010, p. 148)

In a survey of the top 50 American MBA programs, Navarro (2008) found that “...experiential exercises range from real world business and consulting projects to management game simulations and business plan competitions” (p. 114). Navarro’s research found that “...many schools appear not to require significant integrative and experiential elements in their core” (p. 116). However, Sciglimpaglia and Toole (2010) found experiential field-based projects widely used in U.S. business schools but did not specify if this type of learning was required or optional. In a study of “168 graduate management programs [worldwide] that had revised their core curriculum between 2009 and 2011” (Rynes & Bartunek, 2013, p. 182), almost all of the full-time MBA programs in the survey included courses with experiential field-based projects, with 29% requiring such projects for graduation and 67% offering the projects as an optional elective.

As DeFillippi and Milter (2009) assert, this experiential type of pedagogy is learner-centered, because students are required to direct their own learning. “Project and problem based learning methods draw upon a constructivist perspective on learning, in which students are responsible for constructing meaning from their experience. In each mode, education is thus learner-centered rather than teacher directed. Indeed, the role of the instructor is more focused on providing facilitation and social and technical support than explicit direction or knowledge transfer,” the authors said (p. 345). The authors state that a key distinction of problem vs. project-based learning is “...that project-based learning involves the construction of a concrete

artifact or project deliverable (the draft of a design or an end product) as an outcome of project work.” (p. 350).

One example of an MBA program that includes experiential FBL learning is the Ross Business School at the University of Michigan. This school requires a team FBL project entitled the “multidisciplinary action project (MAP).” An article in the Association to Advance Collegiate Schools of Business (AACSB) publication *BizEd* described the structure of this course:

In January, students form five-person teams and bid on the projects they’d most like to tackle. Once they’ve been assigned their projects, students attend weekly advising meetings with faculty and tap the expertise of research consultants, librarians, communications coaches, and second-year MBAs. The school integrates such milestones and points of contact to keep student teams on track. At the end of the course, students deliver their recommendations to the client. (Bisoux, 2011, p. 30)

As this description suggests, various facilitation roles can support experiential FBL projects. This is a key distinction of this instruction (Raelin, 2010). Rather than the professor leading instruction, the professor, as well as others, supports the students in more of a coaching role that facilitates learning.

The organization, planning and coordination of experiential learning courses, particularly when done at scale, require substantial human and financial resources. Students need support as they work in teams on messy, complex and ambiguous problems in unfamiliar, difficult and high-pressure situations. Without proper support, teams can become dysfunctional, considerably diminishing the benefits of experiential learning. (Datar et al., 2010, p. 157)

Skipton and Cooper (2012) also comment that ‘real-world’ experiential learning in business schools “...require more individual coaching and assessment, and thus ... requirements for quantitative and qualitative increases in teaching effort and infrastructural support” (p. 36). However, despite these challenges in adequately providing the needed support, it has been shown that this pedagogy can reap significant benefits, enriching the student experience and credentials they bring to the workplace, and helping schools build stronger relationships with companies, recruiters, and alumni (Bisoux, 2011).

INFORMATION LITERACY INSTRUCTION IN BUSINESS SCHOOLS

The provision of instruction on effective information gathering and use has been referred to in library and information science as information literacy (Grassian & Kaplowitz, 2009). Since the concept was introduced, a number of competency standards in information literacy have gained acceptance as guidance for teaching these skills (Eisenberg, Lowe & Spitzer, 2004). The standards developed by the Association of College and Research Libraries (ACRL) in 2000 and reconceptualized in 2016 (Berkman, 2016; ACRL, 2016) have been the most frequently adopted standards, particularly by academic libraries.

The need to provide instruction in the language of business vs. the library language of ACRL is raised in O'Sullivan's 2002 article "Is information literacy relevant in the real world?" O'Sullivan emphasizes that the discourse on information literacy has largely taken place in the academic library domain, and speculates that in the area of business, "...We must search for new ways of describing information literacy, and align it with business concepts" (p. 13). In 1991, a report issued by the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) states that information literacy is one of the five essential competencies for solid job performance (Cheuk, 2002). Other symposia and initiatives have highlighted the need for information literacy skills in the workplace (Grassian & Kaplowitz, 2009). Matarazzo and Pearlstein (2014) provide additional evidence of this need.

Some information literacy standards and instructional frameworks specific to the workplace have been proposed (Bruce, 1999; Cheuk, 1998; Cheuk, 2002; Kirton & Barham, 2005; Leigh & Gibbon, 2008; Lloyd, 2006). All incorporate some attributes of the competencies recommended by ACRL but emphasize information use in the workplace. With a focus specifically on business students, Cullen proposed a "Conceptual Framework for MBA Information Skill Development" (2013a, p. 415). This framework emerged from primary and secondary research on the information skills that MBAs should possess. The framework includes factors that influence the design of this type of instruction and five dimensions of the desired skills outcomes.

Business schools are different from other schools in the university because of their traditional, heavy reliance on the case method (Datar et al., 2010). Consequently, the support provided by the library to the curriculum has been different. With the case method of instruction, there is less need for student research because the case typically includes all the data used for the class discussion (Berdish & Seeman, 2011). Business school programs also typically include strong career support for students with librarians helping MBA students with research to prepare for interviews and career exploration (Barnhart & Ogur, 2014). The increase of FBL projects that require student research has changed this dynamic with librarians now needed more as well to help with these teams.

There are a number of examples in the literature of business librarians providing instruction (Fiegen, 2011; Hesseldenz, 2012; Huber, 2013; Roldan & Wu, 2004). Klusek (2012) provides an overview of the variety of engagements that ranged from indirect activities such as creating online research guides to being involved in serving as "educational planner" (p. 195) in the design of information instruction and use in a specific course. Another example of a fairly extensive engagement of business librarians designing and providing instruction with an MBA program is the core curriculum of Goizueta Business School (GBS) (Crenshaw, 2016; Cullen, 2013b) at Emory University. A distinguishing characteristic of this instruction is its conceptual viewpoint on the effective use of evidence, which is a critical component of MBA instruction (Datar et al., 2010). The GBS program requires a full-semester experiential learning course entitled "Goizueta IMPACT" that all MBA students complete during the first semester of the program. The students are also required to select from six experiential field-based learning elective courses.

One motivation for the different way instruction has been designed in the GBS MBA program was in response to research that showed in curricular activities, librarians did not always effectively communicate how their expertise added value (Anthony, 2010; Cullen, 2013c; Julien et al., 2013; Julien & Pecoskie, 2009; Saunders, 2012). Consequently new methods of explaining core ideas were developed to support this instruction. These were encapsulated in five “business intelligence” frameworks created with the program’s associate dean to communicate the key concepts (Cullen & Noonan, 2014a-e) derived from research on the role of data and evidence in decision making (Keisler & Noonan, 2012).

There have been few surveys of how librarians provide instruction across business school programs. A 2001 survey administered by Abels and Magi was the most recently published systematic review of the operations of U.S. academic business libraries. These authors focused their review on the libraries of the top 20 U.S. MBA programs based on the most recent *U.S. News & World Report* ranking (1999). Abels and Magi reported the resources and the services of the business libraries in the survey, including instruction, and found that “...there seems to be a preference for user education sessions that focus on topics over resource specific sessions” (p. 17). However, this survey did not report further descriptions of how business librarians were working with their business school’s curriculum.

A recent book entitled *Business School Libraries in the 21st Century* (Wales, 2014) reviewed the challenges and opportunities faced worldwide by these libraries. The final chapter included the results of a survey of academic business library director groups from North America, Asia-Pacific, and European regions on key challenges their libraries would face in the future. There were 23 business librarians who responded to this survey from the total combined membership of over 90 institutional members in the Academic Business Library Directors of North America (ABLD), European Business School Librarians’ Group (EBSLG) and Asia-Pacific Business School Librarians’ Group email lists. The only emerging theme included about instruction was the following statement: “...the relationship between the library and teaching – comments related to the rapid changes to curriculum and the disconnect between library and teaching staff” (p. 195).

An unpublished study by Cullen (2013b) included a survey of members of the Academic Business Library Directors of North America (ABLD) with a 67% response rate from its membership of over 40 institutions. This survey revealed that most of the business libraries were providing some form of training or instruction for their MBA program’s core and elective curricula. However, in measuring the scope and extent of engagement in the required MBA curriculum, “...for the majority, less than 1% of total core course hours were devoted to in-class teaching by librarians” (p. 54). This measurement was used to indicate the extent of integration of librarians with the curriculum. This assumed that a librarian in the classroom teaching indicated a particularly high level of partnership and engagement. Although there might be other approaches to measuring the extent of MBA curricular integration of librarians, this review of the literature did not identify any such studies.

One form of intensive partnership between business librarians and their key stakeholders in curriculum and information literacy instruction is embedded librarianship. In the past ten

years, this practice has increasingly been adopted by academic librarians as a way of providing curricular support. Embedded librarianship is defined by Shumaker and Talley (2009) as:

Focusing on the needs of one or more specific groups, building relationships with these groups, developing a deep understanding of their work, and providing information services that are highly customized and targeted to their greatest needs. It involves shifting the model from transactional to high trust, close collaboration, and shared responsibility of outcomes. (p. 9)

In his overview of embedded librarianship in academic libraries, Brower identifies the following elements of these engagements: "...Embedded librarians collaborate with users...[They] form partnerships on the department and campus level..., Provide needs based services,...Offer convenient/user-friendly services outside of library settings, ...become immersed in the culture and spaces of our users" (2011, p. 13). Hines (2013) identifies two challenges librarians faced in approaching and deploying this level of engagement; these included the amount of time required to do it well and the communication and outreach skills required to make the necessary connections and developing trust. Nevertheless, some business librarians have engaged with their curriculum by following this model (Berdish & Seeman, 2011; Li, 2012). Examples found in the literature of business librarians supporting field-based learning (FBL) projects at U.S. MBA programs included the business libraries at Harvard Business School, Anderson School of Management at the University of California, Los Angeles (UCLA), Goizueta Business School at Emory University, and the Ross School of Business at the University of Michigan (Berdish & Seeman, 2011; Crenshaw, 2016; Horne & Seeman, 2016; Rosen, 2015).

Research Question and Theoretical Framework

The main research question addressed by this study is what roles are business librarians currently playing in FBL activities at these programs and are these roles formal or informal? And as part of this how extensively are business librarians integrated in this curriculum?

This aimed to analyze the business librarians roles in supporting FBL in the various programs, and investigate which roles were formal or informal, the functions of these different roles, and how they were providing information-related support. In MBA programs in which business librarians had formal roles within their program's experiential FBL, the research aimed to identify the extent of the librarians' integration in the curriculum, the type of activities in which they were involved, and any changes in job responsibilities that were necessary to accommodate this support.

Theory, as defined by Johnson and Christensen (2008), "refers to an explanation or an explanatory system that discusses how a phenomenon operates and why it operates as it does" (p. 20). Role theory informed this research with an appreciation of the importance of assigned roles in determining how organizational systems function (Biddle, 2000; Hall, 2002). Role theory was considered in evaluating the current roles in place and changes that had taken place to influence any adjustments in librarian roles as part of their support for FBL at their institutions.

Methodology

PARTICIPANTS AND DESIGN

The sample for this study was derived from the top 50 U.S. MBA programs based on the 2015 ranking from *U.S. News & World Report* magazine (Boyington, 2014). This exploratory study describes how these schools were using experiential learning during the timeframe of data collection following a mixed methods approach which was initiated in May 2015 and completed in March 2016.

Two-year, full-time MBA programs were targeted for this study because they are representative of the most typical and established format for this type of degree (Hay, 2013; Khurana, 2007). Broadly referenced as a benchmark for American business schools (Rubin & Dierdorff, 2009), the *U.S. News & World Report* ranking was selected as a means to identify the schools for this research. The table in Appendix A presents the schools that were in the top 50 programs from this ranking.

The 36 programs ultimately examined in this study varied in size from programs with less than a hundred students to those with over 1,000 full-time students. Some programs offered only two-year, full-time MBA programs, while others offered a diverse variety that included evening, weekend, modular and accelerated MBA programs. The commonalities in much of the curricular content in these 36 programs reflect the standards imposed by the Association to Advance Collegiate Schools of Business (AACSB), the organization that accredits these business schools.

The research design was a descriptive multiple-case study (Eisenhardt, 1989; Yin, 2014), with the data collected in two ways. First, I sent an online survey using *Qualtrics* software to a business librarian at each of the top 20 schools. Later the same survey was sent to a business librarian at each of the schools ranked 21 to 50 in the *U.S. News & World Report* list. From the initial survey of the top 20 programs, six MBA programs were identified for more in-depth study as cases. Following the requirements of the descriptive multiple-case study method, the six programs were selected by their similar characteristics (top two-year U.S. MBA programs) as well as contrasting features such as program size and their approach to and support for experiential field-based learning projects (Yin, 2014).

DATA COLLECTION

Table 1: Data Collection Methods

Data Source	Data Collection Method
One librarian connected with each of the Top 50 MBA programs	Email questionnaire with mostly closed questions.
Website review for six of the Top 20 MBA programs	Website of each school searched for information on experiential field-based learning projects in the

	curriculum.
Professor, Career Service Professional and Business Librarian at each of the six case study institutions	In-person or phone interview

Table 1 identifies the data collection methods used. The data collection commenced with the online survey that was distributed in May 2015 to the top 20 ranked institutions; all responses were received by June 2015. A librarian at 19 of the 20 schools responded for a response rate of 95%. The first online survey included a question that asked if the respondent was interested in more in-depth participation in this study. Of the eight schools that volunteered for more in-depth participation, six were selected as case studies. A subsequent version of the same online survey was sent to the 21-50 ranked programs in spring 2016. A librarian at 17 of the 30 schools responded.

Table 2: Characteristics of Six Institutions Selected to be Case Studies

	US News Ranking (Range)	Experiential Learning Required?	# of MBAs (US News)	Public/Private?	# librarians providing MBA/business support
MBA Program 1 (MBA1)	(1-10)	n	(1000-2000)	private	4
MBA Program 2 (MBA2)	(1-10)	y	(300-600)	private	6
MBA Program 3 (MBA3)	(11-20)	y	(300-600)	private	5
MBA Program 4 (MBA4)	(11-20)	y	(600-1,000)	public	3
MBA Program 5 (MBA5)	(11-20)	y	(600-1,000)	public	5.5
MBA Program 6 (MBA6)	(1-10)	n	(1000-2000)	private	6

Table 2 depicts the characteristics of the six programs chosen as case studies. Half of the programs were in the 1-10 rankings with the others in the 11-20 rankings. A third of the programs were in the lower range of student enrollment from 300 to 600 students; a third in the middle range of 600 to 1,000; and a third in the upper range with 1,000 to 2,000 students. In four of the case studies, field-based learning courses were a required part of the curriculum; in these four programs, business librarians had a formal role in the curriculum.

After the six institutions were identified, information was collected from their websites on their FBL course offerings. In addition to inform the proposal for my dissertation (Cullen, 2017) from which the research presented here was extracted, a review of all 20 school websites was conducted in spring 2015 to gather information on whether the programs offered experiential field-based learning and whether it was required or only an elective course. This sort of review was not done for the MBA programs ranked 21 to 50. The review of websites followed the method used by Rubin and Dierdorff (2009) to identify manifest content related to FBL at the schools. The recording units (Wildemuth, 2009) used to track descriptions of relevant content were the pages from each business school's website.

In total, 18 interviews were conducted in the fall of 2015. Interviews were conducted with a career services professional and a business librarian from each of the six schools. A faculty member who taught in the experiential field-based learning curriculum and was

responsible for evaluating final project deliverables was also interviewed in five of the six programs. All interviews were with one individual except one. For five of the case institutions, the interview with the business librarian was conducted with the head of the business library. In one interview, the researcher met with three business librarians at the institution as a group that included the head and two other business librarians. Seven interviews were conducted with career services professionals. In five instances, only one person from the institution was interviewed. For one institution, two career service professionals were interviewed separately at the request of the first career services staff member interviewed. The interviews ranged in length from seven minutes with a career services professional to 85 minutes with a professor. In general, the interviews with the professors were the longest and with the career service professionals, the shortest.

All interviews were conducted in person or by phone using an interview guide (Rubin & Rubin, 1995). Three of the business librarian interviews, two of the career services professional interviews, and three of the professor interviews were conducted in person. The remaining interviews were conducted by telephone because of the geographic location. A semi-structured protocol for interviewing was followed in both the telephone and face-to-face interviews with a guide used as an anchor for the “conversational partnership” (Rubin & Rubin, 1995). The interviews were digitally recorded and processed by a transcription service.

PROCEDURES

Qualitative and mixed method techniques (Creswell, 2007; Miles, Huberman, & Saldana, 2014; Yin, 2014) were used in reviewing and analyzing the online survey responses, website content, and the interview transcripts to determine general themes and commonalities. To facilitate greater in-depth analysis, the entire interview transcripts were loaded into the computer assisted qualitative data analysis *Atlas.ti* software for coding. Codes were established following the procedures of Miles, Huberman, and Saldana (2014). This coding was checked for inter-coder reliability by three reviewers. After all coding was completed and revised, a second review was conducted to cluster codes for general themes for analysis and to identify quotes that would support evidence in this data. As a form of member-checking (Padgett, 1998) all interviewees were contacted with the quotes to be included from their interviews. Of the 18 respondents, three requested slight adjustments in their quotes. These adjustments had no impact on the original meaning conveyed in their interviews.

Results and Analysis

This section provides analysis of how business librarians were supporting FBL at the 36 surveyed MBA programs, and details on the specifics of business librarian support of FBL at the six case study institutions. The complete results from the online survey are located in Appendices B and C. Due to a computer processing error, the results from survey question 4 were incomplete and consequently not included in these results.

The survey data indicated that the number of business librarians that support FBL at these MBA programs ranged from 1 to 11 business librarians. Tables B.1 and B.2 describe the number of business librarians at each school that support FBL in these MBA programs, the total number of full-time MBA students, the schools' public or private status and business librarian reporting and funding relationships. There was a large discrepancy in the ratio of librarians to students, with the largest discrepancy at two schools which had one business librarian to support an MBA class of over 500 students. In a number of large programs, support was provided by three or fewer librarians. The websites of the top 20 ranked Full-time MBA programs were reviewed. Table B.1 shows that at 11 of these schools taking an FBL course was a required part of the curriculum. For the others it was only an elective course offering. This data was not collected for the programs ranked 21 to 50 but is included to show the popularity in general for these types of courses. Table B.2 shows that at seven of the institutions business librarians answered "yes" to having a formal role with FBL at their school and being directly involved in supporting experiential field-based learning projects. Four of these institutions were among the six case studies.

The list in Table B.2 is organized by schools in which the business librarians had a formal role with FBL followed by those that did not. This information is accompanied by the business librarian reporting structure, source of funding, and the location of the business librarians. There was no association between whether the business librarians had a formal role with FBL and their source of funding, reporting relationship, or location. In 20 programs, the business librarians were located in the business school and in 15, within the main library. In one program, the library served both the business and another professional school. Some programs did not have business library departments. Instead, there were just one or two librarians dedicated to a business focus.

In more than half of the programs, funding for the business librarians came from the central library or a combination of the business school and the central library. In a few cases where the business librarians were located in the business school, the funding came from the central library. In terms of reporting relationships, the majority of the business librarians reported to the central library and not the business school.

HOW BUSINESS LIBRARIANS WORK WITH FBL

One business librarian commented that the increasing demand for FBL project courses in the core curriculum of the full-time MBA program as well as other programs had resulted in the creation of more business librarian positions on his team. The librarian said that beyond their support for the full-time MBA FBL project course teams in the spring, there were also other FBL project teams from other programs that were supported by the librarians:

We also have programs in the summer. We have other programs that last throughout winter term, the weekend MBA program is during that time as well. So, there's very few times in the year where we don't have teams... what we've been able to do over the last couple years is basically try to keep up with the increased demand. (MBA5 Librarian)

This same school that had seen such an increase in demand as a result of their need to

support FBL project courses was also a business library space that had substantially reduced its size. This change to a smaller space did not include a reduction in business librarians. The librarian credited their extra activities in proactively reaching out, and being heavily engaged with FBL courses and other “non-traditional assignments” in the business school as factors that had “saved” them:

We’ve actually over the past -- let’s say 9, 10 years since I’ve been [here] ... focused on doing more with the community by really being proactive, by being service orientated. I’m basically grabbing non-traditional assignments, and I think in the end you can make the argument that it served us very well because when we went through last year the process of actually removing all the books in the library and removing all the management of the space in the library, that the first thing they didn’t say was, “Well, why do you need all these people around if you’re not managing a print collection?”...Part of it was taking on new service opportunities and moving people around...I think service has been the element that’s really saved us and saved the staff here. (MBA5 Librarian)

In the online survey results one way almost all these librarians indicated they provided support to FBL project courses was through standard reference service (94%). Other common ways the librarians provided support was creating web guides with lists of recommended secondary sources (58%) and providing optional workshops on research as part of experiential field-based learning projects support (36%). Half of the librarians surveyed indicated that there was no standard pattern to when they met with MBA students at their programs, while 22% indicated that they typically met with them repeatedly throughout the length of the FBL project. A subsequent question provided additional context with librarians at 7 of the 36 schools stating that they often did meet with the whole team even though they were not formally engaged with FBL and assigned to a team.

In measuring the librarians’ performance and formal job responsibilities, only 22% of the librarians indicated that their work supporting FBL was specifically included in their performance reviews, while only 11% indicated that their job responsibilities had changed to accommodate FBL course support. The survey also asked if positions had been added to their program to support information gathering and analysis for FBL projects. 10 of the respondents said “yes” to this question, but most of the additional positions were just librarians from other subject areas such as forestry or engineering. An example of a non-librarian position listed was “Director of Startup Consulting Program.” The survey only asked for a listing of job titles and not a description of job responsibilities.

INFORMATION RELATED FUNCTIONS AND SKILLS AND FBL

Questions 14 and 15 in the business librarian survey referenced the list of information related functions and skills in Table 3. These are capabilities in gathering and analyzing information that can be developed by students through experiential field-based learning projects. The research supporting this list of information functions MBAs can develop with FBL projects is derived from the five *Business Intelligence Briefs* (Cullen & Noonan, 2014a-e).

Table 3: Information Related Functions and Skills

Breaking a problem apart - Ability to break apart a problem effectively to identify the questions that will need to be answered and sources of information where answers to those questions might be.
Confronting information gaps – Approach what cannot be found constructively in terms of possible alternative ways to answer the question. Understand the challenges and limitations in gathering information to support the decision making process to solve real life business issues.
Contextual Intelligence – Identify facts connected with the past and/or present situation.
Creative Intelligence – Use information gathered to consider or predict “what could be.”
Problem Finding – Use information gathered to explore potential risks.
Integrative Thinking – Consider multiple options from diverse sources and effectively synthesizing information.
Time management and resource allocation – Implement an effective plan for doing and delivering the work.
Balanced use of types of evidence - Effectively balance the use of primary (e.g. interviews, customer surveys, internal company reports) vs. secondary information sources.
Credibility - Assess factors regarding the creators of information and their motivations to determine its credibility.
Evidential Responsibility – Document referenced sources and present information that clearly communicates and demonstrates authority and credentials concerning a point of view.
Copyright - Appreciate issues around copyright and fair use in the proper use of information.

Survey Question 14 posed the question: “When you are working with students on field-based projects how often do you help them with these information functions?” These data were collected to determine how many business librarians had more of a proactive instructional role through their support of these varied information related functions and skills. In examining the ranked responses to this question with the listed information functions in Table 3, “Confronting Information Gaps,” “Credibility” and “Evidential Responsibility” were highly ranked by most respondents. The four areas ranked the lowest with less or no involvement were “Creative Intelligence,” “Problem Finding,” “Time management and resource allocation” and “Balanced use of types of evidence.” This suggested areas of information skills that could be developed through FBL where the expertise of librarians was not typically utilized.

Question 15 asked which roles provided support with these information functions and skills. The other roles listed were the faculty members advising projects, individuals at the project's company or sponsor organization, student project team members, and other support roles. When comparing these high and low rankings with the responses from Survey Question 14 on which roles the business librarians identified as providing support for from the list of information functions, it was notable who the librarians saw as supporting the acquisition of the skills that they felt they were supporting less or not at all. Ranked the lowest with less or no involvement were: “Creative Intelligence,” “Problem Finding,” “Time management and resource allocation” and “Balanced use of types of evidence.” These identified areas of information skills that could be developed through FBL where the expertise of librarians was not typically being applied. But only for “Problem Finding” and “Time Management” did more business librarian respondents indicate in Question 15 that they saw advising faculty or other roles as more likely to provide this guidance than librarians. For functions where the business librarians on average felt they did tend to offer support, the data pointed to potential allies who librarians could partner with in providing this assistance.

There was also evidence from the survey comments that some librarians felt that providing assistance with these information related functions and skills did not pertain to their role. A librarian from one institution responded that these questions could not be answered because their librarians “are not involved in the program enough to know how every student gets assistance.” Another respondent was uncertain about responding because she was “unclear what defines an experiential field-based learning project” and did not see how these categories related to “a librarian’s usual role.” The response rate for questions 14 and 15 was 35 rather than 36 for this part of the online survey.

The interviews with the business librarians in the six case studies provided more detail on how they were supporting FBL at their schools. In one program, the business librarians had a very close partnership with the FBL course. A professor at that school provided details on the varied ways their expertise contributed to the program:

If we think about the core of what happens in a field project, there has to be some actual fact finding. There has to be asking good questions and finding good answers and then making sense of that. ...Not only is the library traditionally the source of a lot of materials that can be the raw material for that, but that’s also the locus of where a lot of experts are on how one should do that, how one might learn a process of really careful inquiry and careful evaluation of an exploration and evaluation of evidence. And so with their strong interest and willingness to take some risks and explore we have brought the library in much more closely in this process...So they play a very important integrated role in developing the ideas, contributing ideas and framework to what [FBL course name] is about. Using all of those ideas, they play instruction roles, they play evaluative roles, and of course they’re a great counsel. They give us the feedback of what the students are and are not getting and we share our frustrations with each other about what we can do and what’s the most efficient way to try to move them forward. (MBA3 Professor)

At MBA4, the business library director and two other business librarians supported students on these FBL projects. A librarian was assigned to each team, which was required to meet with that librarian early in their project to review relevant resources. The meeting took place in a conference room in the library where the librarian during the session referenced an online guide or “LibGuide” that the library had compiled specifically for the team’s project. The professor called these “online platforms” (MBA4 Professor). This business library had a coordinator who was the library’s liaison with this core FBL course. The various individuals in this role over the years had established how the business librarians worked with the course:

So there’s one person who is considered the -- and has the title of -- has the role of coordinator of basically administrative support. So they’re the official liaison from the library to the program for this field study. And that means that they are checking in, they’re writing some of the publicity. They’re working with the program office to know how many teams are there. What are the projects. And who are the people on the different teams, etc., etc. So that’s a very administrative role. .. The administrative coordinator on the library side -- she does a quick kind of overview with the students

during -- there's something called student launch. So there are days during the fall where the students come together and they have all kinds of different lectures from different components of the field study program. The librarian gets a short piece of that. So it's more reinforcing what they heard already from orientation and what they know. (MBA4 Librarian)

In this program, the librarian also mentioned that after the librarians met initially with their teams, they typically returned for help with their research again. The professor at this program felt it was important that student teams were exposed to the business librarians and their support with secondary research very early in the learning process:

The quality of the research is quite good. The secondary research is really supported by a very actively involved ... Business Center Library at [business school name]. They're very actively involved in the very beginning. So they develop online platforms for each team. They know what the scope and industry is of each team's project by the middle of August, when school starts, and they start setting up these online platforms where there are direct links to industry and segment and competitor data, environmental data, industry associations, trade events, government organizations, demographic databases, all that sort of stuff. So that then the student teams, once they're formed and they're matched up with a particular company and particular project, then they meet with the librarians and the librarian spends time with each individual team taking them through the platform that they've already set up, which really accelerates the secondary research that the teams do. So it's very good, very effective. (MBA4 Professor)

At MBA5, business librarians were also assigned to each team and had a formal role. In total, 5.5 business librarians supported this required FBL course. The librarians grouped the teams supported by similar topics to manage the scope of work. Typically, each librarian supported 14 to 18 teams and would try to meet with all their teams the first week of the project. The business library director also supported some teams. After the initial consultation, teams scheduled additional meetings as needed. Sometimes, the projects did not require additional secondary research support and the librarians would not hear from those teams again. According to the business librarian interviewed at this school, about 25% of teams needed no extra support beyond the first meeting, 25% needed a high level of support and interacted frequently with the librarian, and the rest were somewhere in between.

In another program, six librarians supported FBL teams with one librarian assigned per team. Some librarians supported twelve teams. Teams that were not required to meet with their assigned librarian did not always meet with them. The faculty lead at this school was unconcerned that some teams did not meet with a librarian. He felt that the: "Overall role of the librarians is minor if not unimportant...I would say most [teams] don't use their librarian...But there are times when they really, really, really need the librarian" (MBA2 Professor). He then continued that a key part of FBL was to learn how to work with expertise:

It's again, its access to expertise. For me, the point is not that everyone should go to the library and listen to a lecture on databases. I mean...they're not going to learn anything from that. But they should be thinking, is there anything there that I might need? Can I,

is it worth half an hour of my time going and finding out what they might have? Just as it is with the survey expertise and the interview expertise, and so on. (MBA2 Professor)

At MBA1, the librarians were not formally connected to FBL, and simply gave a half-hour presentation in class when requested. At this school, librarians often did not meet with MBAs who were taking the FBL project courses. Any consultations were usually with just one member of the team. However, the business librarians almost always made an online guide called a LibGuide that they included in the school's course management system; this included recommended resources to use for research on these projects. As one librarian stated:

Once the research guide goes into the Canvas site, they're kind of happy and if they get stuck they come to us" (MBA1 Librarian). The librarian at this program said that she estimated that librarians met with less than 25% of the teams working on FBL projects. She added that at her program it was "not part of the MBA culture to ask a librarian. (MBA1 Librarian)

Librarians at this school did not receive information in advance on the teams in the FBL courses. Instead, the service was more dependent on a "self-service" model where the librarian created online guides of the available business research tools that students could reference. As a further example, the librarian mentioned that a recent important initiative of her business library department was linking an online "Business Library Starter Guide" to all courses in the school's course management system.

At MBA6, librarians did not have a formal role in their primary FBL elective course offering. Teams were not assigned a librarian or required to meet with one. However, the faculty lead recommended that teams meet with a librarian and highly valued the expertise the librarians provided the students. The faculty member felt that it was the students' responsibility to reach out to the librarians. The librarian at this program said that they were not formally involved in FBL project courses and did not do any formal outreach. This was attributed to capacity issues. There were six business librarians on her team and she felt she did not have enough staff to partner with each student team and at the same time fulfill all of her area's other service obligations. They were just reacting to on-demand requests and were focused on primarily supporting faculty research over student research. She also mentioned that with these projects, she felt "uncomfortable with what students may or may not be doing with our licensed resources" when they were working with a real outside business. This also discouraged her team from pursuing outreach.

In all programs, the business librarians were appreciated for the expertise they offered their institutions. While not all respondents felt they needed to be highly engaged with FBL projects and meet with all student teams, some professors indicated that all student teams needed to meet with a business librarian for advice about research. In the four programs where the business librarians provided active formal support for FBL, everyone -- including the manager of the library-- took part in supporting these student teams. In three of the four programs, the business librarians were responding to a faculty member's directive. Only at one program were business librarians working side-by-side with faculty in designing how to present and discuss the information component to students as part of the course.

INFORMATION GATHERING COMPONENTS OF FBL PROJECTS

In all the programs, students were expected to collect some sort of primary or secondary data. Primary information gathering typically consisted of surveys or interviews. As one professor said, "...Research is a pretty broad term. We have established in the syllabus and a principle, which is that every project must develop, to some degree, some original information...But surveys and interviews are predominant" (MBA2 Professor). For this professor, gathering secondary data was seen as possibly relevant for some of these projects, although he stated that primary information gathering from his perspective was a more important objective in FBL:

I think teaching them to do interviews is a huge thing... I mean setting this up and then doing this and then analyzing the results in a creative way I think is much harder than analyzing a survey... [then] having to put it all together in a presentation and being at least somewhat held feet to the fire about the logic of that presentation, I think does give them some good training in using information taken broadly to tell a story that is logical and credible and not based too much on business stereotypes. (MBA2 Professor)

This was in contrast to a respondent from a different school who shared that "in our case all advisors are expecting every team to do some amount of secondary research" (MBA4 Librarian). A faculty member interviewed at another program viewed practice in both primary and secondary data gathering as an important component of this instruction:

Sometimes it's survey work, sometimes it's interview work, but a lot of it does involve what we might call library research where you've really got to go into databases and news sources and try to come up with answers to the questions that are answerable in that way. And so depending on the situation it's a mixture of a variety of different kinds of primary, secondary types of sources. (MBA3 Professor)

STUDENTS UNDERSTANDING OF BUSINESS LIBRARIAN SUPPORT

A number of respondents indicated that they did not think most of the MBAs knew how to gather information very well. One respondent felt that "students don't understand how to use the librarians" (MBA2 Career2). She continued that they did not know what they did not know, were more comfortable with searching with Google, and wanted information handed to them. Another summed up his view by saying that "...our students are not PhD students. You know, they're not interested in research... they really have no, well, a very unsophisticated view of data quality" (MBA2 Professor).

Another respondent felt that the situation had deteriorated over the years and students had a false sense of complacency that now on the internet all information was easy to find. She shared that she recently had:

...encountered some students here who I think have the least appreciation of how to do research that I ever encountered. And I think it's just because time is passing. In 2015

you've got different students than you would have had in 2010 for example. I think it seems easier access to our resources -- super simple. You don't need to have the intermediary of the librarian as much. (MBA4 Librarian)

Several interviewees echoed this respondent's comments that "students are almost completely uninformed about what a modern librarian can do" (MBA2 Professor). Another faculty member described the help business librarians provided student teams and how it facilitated their information gathering. However, he lamented that the only reason students did not make use of librarians' assistance was because "they're lazy":

Usually, the librarians are very helpful, students will come back with all these reports, they'll have all this data. I mean, very helpful. I mean, teams that don't follow that advice generally pay, because, they either find that they don't find the material, or they spend a lot more time finding it. And if they had just gone over and asked, it would have been easy. And here, they can just email, and they'll just send them stuff through by email, I mean, it's so easy...Students are just lazy, that's why [they don't]. That's the only reason why, they're just lazy. (MBA6 Professor)

In a different program, the professor stated that he felt students were actually "eager consumers of library resources and then the librarians seem to like tracking down crazy stuff about the market for bulldozers in Pakistan or something" (MBA5 Professor). In some cases, respondents indicated that students could have unrealistic expectations of librarian support:

Let's say I'm doing work on coffee shops, OK? There's a ton of stuff on that. And my buddy is doing work on a new medical device that is going to help with stomach cancer. There's not a lot on that. And yet, they look at this as being, 'Oh, your librarian got a lot, my librarian didn't do squat.' (MBA5 Librarian)

Following on this idea, another business librarian stated how important the personal engagement of the librarian working with students to identify information was in demonstrating how their expertise added value to this work:

It's that type of working with them and trying to understand what the goal is here and where we're going to be able to give them information or help them with research data and where we can't... I think through these field study encounters when you meet with a team and you show this is what the librarian is able to do for you it opens up their eyes in a way that they have no idea that this is the sort of thing that an academic business library can offer them. And it's not something that's necessarily even promoted that much, certainly not here, as part of the package of this is what you're going to get. (MBA4 Librarian)

PROPER USE OF DATABASES

One concern cited in all of the business librarian interviews was that some MBAs did not understand the limitations on the use of the databases in the library. That these databases were

only for school or personal non-paid professional development work, and for example, not for use at paid internships. This comment typifies comments about these concerns:

It's a huge, huge problem...and understanding that this information is just not a commodity that anybody can use and do whatever they want with. There are responsibilities, there are agreements, there's licensing, there's laws; there's publishers who will not hesitate to sue organizations. And they need to take that seriously. (MBA3 Librarian)

As a way to contend with this, some libraries posted information on their website about proper database use at their institution:

This is a matter of very large concern for us and we have really ratcheted up -- although we always had them sign a form when they came in... The past couple of years we have really ratcheted up our messaging -- content on our website, a pdf document. And then, for the full-time program... -- the dean of that program ...does sort of a kick off before our internship town hall and we now participate in that. (MBA3 Librarian)

In one business library, the proper use of databases was also an issue because the school had an elective FBL project course in which MBA students were working with students from other schools. The business library's database contracts explicitly stated that only students, staff, and faculty from this school could use these databases. In this program, the respondent stated that this issue had played a factor in their not pursuing more aggressive outreach with FBL courses.

WAYS LIBRARIANS PROVIDE TEAM SUPPORT

In the four programs where librarians were assigned to student teams, they had either one individual with the responsibility for matching librarians with teams or the decision was made together as a group. In both scenarios, there was an attempt to balance out projects that were likely to be more vs. less research intensive, as well as grouping by topic when allocating them to each librarian:

Occasionally by the luck of the draw, we'll actually put in requests internally as to what teams we want. We used to have like a fantasy draft, but now we've been doing it -- we've been bunching it more together. A lot of people really don't care. But what we try to do is if there are three teams from Latin American Airlines, for example, I took all three because it could be a little easier down the road to have something more cohesive, and then I could get information that could be applicable for three. But there's -- you have a gut feeling as to what might be busy, but it may or may not be the case. (MBA5 Librarian)

The number of student teams supported in the FBL courses by business librarians ranged from 33 to 80 teams. Table 4 presents the data on the number of teams in the FBL courses in 2015 when the interviews for this study took place. These represent the typical number of teams at these programs. The required FBL courses at these programs are presented in this table except

for MBA6, where information on the main FBL elective course is provided. Most of the schools where librarians were assigned to teams also required that they met at least once with their librarian. The librarian at MBA4 described how her group approached this process:

So we have around 65 teams right now because it's, again, every student who's in the full-time program is in this...So again every team -- it's usually around five people -- is required to do this...This is basically the equivalent of your thesis. You get an advisor. You get a support from the program and you get a librarian. I have a small team so there's three of us that actually do librarian consultations. (MBA4 Librarian)

Table 4: Number of Projects in FBL Course and Support from Librarians

	MBA1 (no main FBL course – various electives)	MBA2 (Required FBL course)	MBA3 (Required FBL course)	MBA4 (Required FBL course)	MBA5 (Required FBL course)	MBA6 (Main Elective FBL course)
#of Project Teams	N/A	56	33	65	80	35
#of Business Librarians available to support them	4	6	5	3	5.5	6
Are Business Librarians assigned to teams?	No	Yes	Yes	Yes	Yes	No
Are teams required to meet with a business librarian?	No	No	Yes	Yes	Yes	No

Striving for a consistent FBL approach in which every student had an equal quality experience was cited by many of the librarian respondents in this study. An important factor was the issue of timing and when to best introduce and subsequently provide librarian support for student teams. In referring to where librarian support was placed in the timeline of the FBL course, one librarian said:

So they changed the scheduling over the last couple of years. Wednesday mornings now have kind of been anointed as this is when they're going to be working on this. So when we're offering consultations we're really trying to target Wednesday mornings because there's an expectation that the students will be on campus...And then we have other times of the week that we think are going to be good times to be available for them when they're not typically in classes. So it's really been, I think, around let's make sure that our scheduling and what our expectations are for when they're available are kind of in sync. (MBA4 Librarian)

Consistency of service was a concern cited by one of the respondents who admitted that the experience of teams with different librarians was not always the same. One librarian said, "...I think the relationship that the librarian has with the students can be uneven, if you will. That it depends on sort of the personality of the librarian, the willingness to engage, the enthusiasm for the work" (MBA2 Librarians). In terms of roles, one business librarian shared that they were not referred to as librarians in the FBL project courses. He reported:

We're considered the secondary research consultants. The primary research consultants are -- there are a few people. ...a faculty member here... and she'll work with students who are looking at creating some primary research -- they want to interview people, customers, potential customers, et cetera. (MBA5 Librarian)

One respondent shared that at times, her role had expanded to other areas of support for these project teams:

I'll get asked questions when I'm working with teams that I think really fall into, 'You need to go talk to your coach about this.' They'll have issues. I'll see them when I'm meeting with them where they're not getting along or they need help figuring out how do I divvy up the work or how do I do a piece of it. I kind of end up being in the therapy role. (MBA4 Librarian)

One program had taken their partnership with FBL much further. A key feature was that learning effective information gathering did not appear only once in the course but was repeated over time:

When it's reinforced in that way in other core and elective courses, which it can be, we will go much further much faster. Because nobody gets anything in business school the first time around. Nobody gets regression the first time through. It's the subsequent reinforcement and application and also the validation from everyone else that this is an important part of thinking well and doing good work, that's where it really is going to connect... One of the portfolio skills that can be helped the most will be in the research area... So for example, instead of the one-off beginning of the semester, here's the library, here's our databases, look forward to seeing you, and then just dealing with people as they come running in ad hoc, we have built in more focused time sensitive and structured training and practice sessions into the course. So within the [FBL course name] curricula across full-time and evening programs there are required sessions where the students in the midpoint of their first semester go through library workshops to get additional instruction. And so the librarians are actually playing the roles of instructors. They've got frameworks, they've got processes, they've got tasks that are designed to integrate with what the students are doing in the [FBL course name] class. The librarians attend the [FBL course name] sessions, they know the material well, and so they and their team can reflect back to the students the concepts and the process steps and even the language that they're getting in [FBL course name] to integrate this and to reinforce this. They play an essential role in the evaluation of the materials. They provide a rubric and a way of thinking about what quality research looks like. They attend the presentations, they review the decks, and they provide scores that become part of the actual evaluative grades of the students as well as qualitative feedback. (MBA3 Professor)

The librarian at this school also mentioned that she felt that an advantage of their approach was that they made information gathering a required outcome. This was because:

We know at the end of the day that, with the exception of a handful of rare students, none of the students are really going to take the research component seriously unless they're

being forced to do it, required to do it... that if the students are truly going to get all -- everything that they're learning in [FBL course name], including the research component, it has to be iterative and it has to be reinforced throughout all of their learning experiences at the school. (MBA3 Librarian)

At MBA4, while their support of FBL was exclusively through supporting student teams with consultations, the librarian alluded to this need to be more "programmatically" and integrated with the MBA program which she referred to as "clients" of the librarians:

I invited all of the program managers to meet with the librarians for them to learn for the first time ever what it is we do during these consultations and what it is we do as we work with the teams month after month after month when they come back for help. They had no idea... So I say that's been a change in terms of trying to make this more programmatic and to have our clients understand just as we're their clients in a sense. (MBA4 Librarian)

When a faculty member described the role of the business librarians at his school, he said that "they're fully respected members of the team" (MBA5 Professor). This suggested that in this program, the librarians had a more integrated role just by designating them as co-members of the "team."

POSITIONING OF TRADITIONAL REFERENCE SUPPORT

The two business libraries that had chosen a more traditional level of support for these FBL projects with staffed as needed reference support provided contrasting reasons for offering support in this way. In one instance, the librarian talked about their investing a fair amount of time creating online LibGuides and consequently assuming the reason they did not hear more from students was because the students found using those guides sufficient. Therefore, she saw no need to advocate for more support beyond the half hour resource presentation she or her business librarian colleagues might be invited to give for an FBL class:

I don't think it has been too time consuming for us because it's not a required course and not every student will be involved in it. Usually we'll -- we won't meet with the entire group and we'll only meet with them once or twice depending on their needs for the semester. Probably designing the research guide takes more time. (MBA1 Librarian)

When business students did seek assistance from business librarians at this school, she continued that:

I won't talk to the entire team. They'll usually portion out the work. So if they need additional help after the presentation they'll pick someone to come talk to the librarians. They wouldn't all come together... But I don't actively reach out to the teams. They know if they need help they'll come to us. (MBA1 Librarian)

The business librarian at the other program (MBA6) stated that ideally she would like to pursue more engagement with FBL project course teams and an "embedded approach," but she

just did not see it as feasible with the number of existing staff: "We are providing office hours in the main building... we are in office hours on a daily basis so kind of a remote reference services [sic]. We are also providing more extensive chat services" (MBA6 Librarian). She then provided more details on why her team did not have the capacity to provide more engaged FBL support given their other established reference obligations:

We have 2,600 undergraduate students so it's not just the MBAs that we are supporting. ... We are trying to support our -- faculty research as well and ... that support for faculty research would be a priority over student research.... So those types of things -- not anything particularly unusual, I guess. It's just a quantity problem. (MBA6 Librarian)

ONLINE RESOURCE GUIDES

Four of the six business librarians spoke about the web-based resource guides they created specifically tailored toward the research being done by the student teams on FBL projects. The platform format used for these at three institutions was called "LibGuides." This references a content management system for creating online guides that many libraries use that is sold by a company called Springshare (Springshare, 2016). Consequently, in several interviews, the business librarians described their online guides as "LibGuides": "I've required every librarian to create a LibGuide that is tailored to that particular project so then that's what we're teaching from when we're meeting with them... So every team gets a LibGuide. There's a certain template that we use for that for the most part" (MBA4 Librarian).

One librarian felt these guides might be a more effective means to communicate with students rather than required team meetings:

This year we got a link to our MBA research guide put into Canvas. Every single student sees that guide. And they've actually been using it so I feel like they want to do their own work and they only come when they're stuck. (MBA1 Librarian)

This librarian mentioned that many of the student teams working on FBL projects at her school did not ask for help and attributed this to one of two factors: "They think they know everything. Or they have the research guide and the resources aren't that hard to use" (MBA1 Librarian). The business librarian at another program spoke about their resource guides that support FBL project work as more "robust" and informative than typical LibGuides:

So these are pretty substantial and these are developed to mitigate their wasting too much time trying to figure out where to begin or how to move through the research process. So they're very robust. They're very, very, very targeted to the client project and I think that one of the things that distinguishes these is unlike what you typically see in LibGuides where you'll just have a series of links and then maybe a one sentence descriptor of the resource -- we are really introducing each individual source to the students relative to their client project and the kind of information and the kind of data they want. So even if they just look at the guide they're already getting layers of the beginning of understanding about how complex and rich these resources are. (MBA3 Librarian)

ADVOCATES FOR LIBRARIANS IN THE FBL PARTNERSHIP

Many interviews addressed how the roles of faculty, career service professionals, and FBL project team advisors could play an important role as champions of the expertise the librarians offered to students. In one interview, the faculty member spoke about recommending to teams that they meet with a librarian and how he valued the expertise the librarians could provide the students; yet he left the decision to them to reach out to the librarians (MBA6). In another interview the librarians said that some faculty insisted that students needed to go to speak to the librarians and others were less adamant. When this support came from the faculty advisor as “have you gone to ask the librarian about this?” (MBA2 Librarians), students were more likely to seek out assistance from librarians. Most of the respondents felt that such advocacy encouraged MBAs to be more inclined to work with business librarians. One librarian spoke about being included in faculty- led team meetings run by more proactive “librarian champion faculty” as a way to become more familiar with a team’s project. This librarian believed that being present at these meetings had helped reinforce the research support librarians could provide for the student projects:

Oftentimes the project description that we get, by the time the students get together with their advisors, it’s changed and we are not informed of that change. So we might do a lot of work that’s missing the mark. So it really was important for me to be involved in a couple of these where I could hear what the students are hearing from the advisors and then I could provide them with better information, more targeted and timely. It was very helpful...I think one of the other outcomes of having us there is that the students see that we have a seat at the table, that they see how the faculty treats and believes that we are part of the team. So I think it just instills in the students that we’re important and that they need to come and use us. (MBA2 Librarians)

A career services professional said that she did not just advise students to see the business librarians; she would detail the steps that students needed to take and how the librarian could help:

They really expect things to be handed to them. So sometimes in order to take initiative you’ve got to actually outline how to do it. OK, these are the steps you need to take and these are the people that can help you. If it’s not easy they don’t necessarily do it. (MBA2 Career2)

THREE APPROACHES TO BUSINESS LIBRARIAN FBL SUPPORT

The FBL approach is evolving as academia seeks new models for this type of education. As new roles are being developed to support FBL, there are issues of contention that are arising from where roles have jurisdiction. For example, between staff administrators of these programs responsible for things like logistics and locating project sponsors and the faculty leads designing curriculum. In terms of active engagement of business librarians, programs differed in how this role has been deployed. This research identified three approaches to the work of business librarians with FBL project courses. The approaches also identify their positioning with FBL as either proactive or more reactive in character. Spitzmuller and Van Dyne (2013), citing the

research of Parker and Collins (2010), define proactive vs. reactive actions as “proactive behaviors emphasize the notion of foresight where an individual initiates actions in anticipation of future outcomes. Moreover, proactive behaviors emphasize taking control or causing change. By contrast, reactive behaviors do not depend on intentionality and foresight. Instead, they occur in response to the situation or incident” (p. 562). In the context of this research, this means roles that were actively engaged with the FBL course vs. those that provided only support when students or faculty in the course requested.

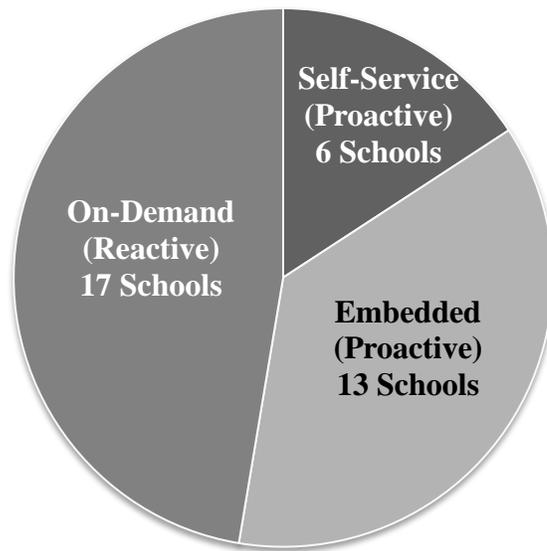
Figure 1 shows the three approaches to the positioning of business librarians with FBL courses and which were followed by each of the 36 full-time MBA programs surveyed: 1) self-service (proactive), 2) embedded (proactive) and 3) on-demand (reactive). In many instances, the focus of the librarians in their work with FBL was not exclusively found in one of these three approaches, although they appeared to be the primary focus. For example, some of the libraries identified as “self-service” indicated that they also scheduled optional “research drop-in sessions specific for these student teams” and another mentioned participating as “program managers” with FBL experiences. Some of the libraries with a more hands-on focus also created self-serve online guides for students to use for these projects. The following section describes in detail the three approaches through which it was found business librarians interacted with FBL.

Approach 1 – Self-Service

In this approach, FBL project support was focused on self-service online guides and resource tools. This required good IT support and infrastructure. A potential challenge was that once produced and completed, such materials are not easily adapted when a project changes its focus; evidence from this research showed that such project changes were typical in these courses. A benefit of this approach was that it allowed the library to more clearly define the use of staff time. This permitted the business librarians to be less affected by changing projects and capacity issues. In the online survey, one institution described their “self-service” approach:

Librarians curate and deliver weekly news updates based on field locations; participate in the field experience (in the role of program managers); develop material to help students learn more about the social and business culture of the regions where they will be traveling; create country specific postcards with resource recommendations and QR codes that link to the related online product.

Figure 1: Three Approaches on how Business Librarians Support FBL¹



Approach 2 - Embedded

In this second approach, librarians met with the FBL course teams with a heavy focus on in-person engagement that supported research on the FBL projects. This required a larger business librarian staff. Consequently, a school with only one or two librarians to support FBL projects probably would not be able to choose this approach. Minimal IT support was necessary, since this approach worked well with LibGuides or even Microsoft Word documents posted to the course management system for students to reference as research guidance tools. One benefit of this approach was that the close interaction with teams allowed for adjustment of research recommendations and guidance as the project evolved and possibly changed its focus. This approach was more connected with activities of the actual course and through its interaction with the other course facilitators. This level of engagement could also lead to the involvement of the librarians in project judging and after action reviews.

The heavier involvement provided the librarians with more information about the projects that could be applied to their work with the student teams. The big challenge was the unpredictability of the demands on time and workload. Providing the right level of support could take away from time available for other duties such as central library committee work and other general demands. Table 5 includes two institutions' comments in the online survey about their school's embedded approach.

Table 5: Comments from Schools with an Embedded Librarian Approach

"It is one of our biggest success stories enabling us to partner and collaborate with faculty and students; it
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¹ The method for tabulating these results involved looking at the institution specific responses to Questions 5-10 in the Business Librarian Online Survey. To guarantee response anonymity the survey results have been provided in the Appendix in aggregate.

has contributed to librarians being seen as part of the student teams and their community; it has greatly increased our visibility and value."

"This is a core role for us. Expectations placed on the librarians by the programs we support can be difficult to meet due to timing of expected consultations. Some programs also have difficulty placing the required library consultation at the best time for the team. Rather than have timing that maximizes the team's needs, the consultation is scheduled during the best time for the program. Even if that might mean the night before a major exam. This relationship, across multiple programs, is a work in progress and ever-improving."

Approach 3 – On-Demand

The final approach was one-shot instruction and on-demand support in which the librarians provided an in-class source review when requested in addition to traditional reference services. In institutions with only one business librarian, this approach might be the only option because it did not require a larger staff. One clear benefit of this approach was that it reflected the status quo of typical librarian support and did not affect personnel issues and the librarians' other job duties. One potential challenge of this approach was that the librarians had less understanding of FBL course work and may not be prepared when higher demand for library services was needed in FBL project courses.

Discussion: Implications of this Research

This study demonstrates the varied connections between business librarians and learning through real project experiences, which is a growing area of business school curriculum. In terms of business library support, some programs indicated that their partnership with FBL curriculum was growing alongside the expansion of FBL courses at their school. Said one librarian, "...One of the things that's really remarkable is that the school has expanded the number of action learning programs that it has, and we've been able to sort of shift and move around work in order for us to support that" (MBA5 Librarian). This respondent added that he believed all business schools would prefer business librarians to be more involved in their FBL courses:

I think there is enthusiasm on the part of the [MBA] program folks to have information support for their teams. There just might not be universal desire on the part of the libraries, especially if they have smaller staff. (Personal Communication, MBA5 Librarian, 7/7/16)

Biddle's (1986) theory on the impetus for role changes in organizations suggests that they can be agreed upon through consensus or imposed on roles through conformity. The data collected in the case study interviews offered evidence that indicated that most business librarians were consensually adapting to supporting the needs of FBL courses. This was illustrated in the librarian interviewed from MBA5 who spoke about his team eagerly adjusting and adapting to new roles in the face of the growth in the number of FBL courses at his program. The online survey results, however, suggested that this level of engagement was not universal. It is possible that other programs could encounter role changes being imposed on them because of the increased popularity of FBL and this more engaged form of project-oriented curriculum. The

Three Approaches model in this study depicts how business librarians are supporting FBL. With that categorization, half of the 36 schools surveyed had not changed their model to support FBL and were only providing reactive on-demand support.

This research contributes to the expanding knowledge of practical approaches for implementing the embedded librarianship model that has gained momentum in academic libraries in the past few years (Brower, 2011). The models in which business librarians were formally supporting FBL at four of the six case studies provide detailed descriptions of their embedded approach within their organizations. These comparative case studies offer a practical resource for librarians. The three categories of support model: 1) self-service (proactive), 2) embedded (proactive) and 3) on-demand (reactive) could also be a useful tool to apply to examine other areas of academic librarian research support work. The model could be used for analysis of cases in which librarians are assuming more proactive vs. traditional reactive roles (Budd, 2005; Grassian & Kaplowitz, 2009).

The evidence from this research also is in agreement with a recent ITHAKA study of academic library deans and directors (Wolff-Eisenberg, 2017). One key issue it uncovered was the growth in libraries of teaching and research support positions similar to the librarian roles working with FBL. In the ITHAKA survey "nearly half of respondents indicated that their library is increasing the share of staffing and budget devoted to developing and improving services that support teaching, learning, and research" (Wolff-Eisenberg, 2017, p. 3).

Conclusion: Limitations and Future Research

A limitation of this study was that it was designed to collect data sequentially and did not include the opportunity to return to respondents at the case institutions to probe further into insights identified after an initial analysis of the interview transcripts. The study also only reflected the viewpoints of the categories of respondents included in this study. For example, a group that could be surveyed would be MBA students to collect information on what they think of FBL courses and the research guidance they receive from librarians and others as part of these projects and its impact on their development as managers.

The results of this study suggest that there are many avenues for future research with FBL. In this study, the business librarian role was explored in greater depth than the other roles. Although this research led to a greater appreciation of the business librarian role as one of the knowledge experts who support FBL, the interviews revealed that it was the faculty, and not the librarians, who referred to business librarians as experts. The role business librarians play in FBL as experts in secondary data identification and collection could be explored further.

Another opportunity for future research would be to expand the study sample to other types of institutional rankings of MBA programs to further explore the norms of FBL business librarian support among different business schools. For example, expanding beyond just U.S. schools by referencing the schools listed in the Financial Times' *Global MBA Ranking* (Financial Times, 2017) would provide a potential sample for an international, comparative analysis of FBL curriculum. Another approach for expanding perspectives on FBL business librarian support

could be to gather observations from other parts of the university beyond the business school. For example, in this study, two business librarians shared that they believed that the central library administration did not appreciate the heavy workload required to support the FBL projects. Consequently, it would be helpful to interview senior library administrators to obtain their perspectives on FBL at their institution's business school and how their business librarians support this type of instruction.

In this study, FBL was shown to bring the ever-changing issues and real practice of business today into the teaching of business schools. It gives MBAs the opportunity to practice what they are learning in a robustly supported environment from a diverse range of experts, including business librarians. The rich data uncovered by this study on FBL project curriculum reveals details on an important focus of business school pedagogy and how business librarians participate in it.

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Appendix A

Top 20 U.S. Full-time MBA Programs (U.S. News & World Report, 2015)

Rank	School
#1	Harvard University, Boston, MA
#1	Stanford University, Stanford, CA
#1	University of Pennsylvania (Wharton), Philadelphia, PA
#4	University of Chicago (Booth), Chicago, IL
#5	Massachusetts Institute of Technology (Sloan), Cambridge, MA
#6	Northwestern University (Kellogg), Evanston, IL
#7	University of California—Berkeley (Haas), Berkeley, CA
#8	Columbia University, New York, NY
#9	Dartmouth College (Tuck), Hanover, NH
#10	New York University (Stern), New York, NY
#11	University of Michigan—Ann Arbor (Ross), Ann Arbor, MI
#11	University of Virginia (Darden), Charlottesville, VA
#13	Yale University, New Haven, CT
#14	Duke University (Fuqua), Durham, NC
#15	University of Texas—Austin (McCombs), Austin, TX
#16	University of California—Los Angeles (Anderson), Los Angeles, CA
#17	Cornell University (Johnson), Ithaca, NY
#18	Carnegie Mellon University (Tepper), Pittsburgh, PA
#19	University of North Carolina—Chapel Hill (Kenan-Flagler), Chapel Hill, NC
#20	Emory University (Goizueta), Atlanta, GA
#21	Indiana University—Bloomington (Kelley), Bloomington, IN
#22	Washington University in St. Louis (Olin), St. Louis, MO
#23	Georgetown University (McDonough), Washington, DC
#23	University of Notre Dame (Mendoza), Notre Dame, IN
#25	University of Washington (Foster), Seattle, WA
#26	Vanderbilt University (Owen), Nashville, TN
#27	Arizona State University (Carey), Tempe, AZ
#27	Brigham Young University (Marriott), Provo, UT
#27	Georgia Institute of Technology (Scheller), Atlanta, GA
#27	Ohio State University (Fisher), Columbus, OH
#27	University of Southern California (Marshall), Los Angeles, CA
#27	University of Wisconsin—Madison, Madison, WI
#33	Rice University (Jones), Houston, TX
#33	University of Minnesota—Twin Cities (Carlson), Minneapolis, MN
#35	Michigan State University (Broad), East Lansing, MI
#35	University of Illinois—Urbana-Champaign, Champaign, IL
#37	Texas A&M University—College Station (Mays), College Station, TX
#37	University of Rochester (Simon), Rochester, NY
#37	University of Texas—Dallas, Richardson, TX
#40	Purdue University—West Lafayette (Krannert), West Lafayette, IN
#41	Pennsylvania State University—University Park (Smeal), University Park, PA
#41	University of California—Davis, Davis, CA
#41	University of Florida (Hough), Gainesville, FL
#41	University of Maryland—College Park (Smith), College Park, MD
#45	Boston College (Carroll), Chestnut Hill, MA
#45	Boston University, Boston, MA
#45	University of California—Irvine (Merage), Irvine, CA
#48	Temple University (Fox), Philadelphia, PA
#48	University of Arizona (Eller), Tucson, AZ
#48	University of Georgia (Terry), Atlanta, GA

Appendix B

Table B1: Total Full-time MBAs to Number of Librarians Available to Support Them

# of MBAs (US News)	# of librarians available to support MBAs	Librarians have a Formal Role with FBL?	FBL Required?	Public/Private Institution	Ratio of # of MBAs and # of librarians available to support FBL
1867	11	no	y	private	1867:11
1711	6	no	n	private	1711:6
1270	4	no	n	private	1270:4
1181	3	no	n	private	1181:3
1047	3	no	n	private	1047:3
886	5.5	yes	y	public	886:5.5
876	3	no	y	private	876:3
825	5	no	n	private	825:5
812	6	no	n	private	812:6
798	2	no	n	private	798:2
708	3	yes	y	public	708:3
633	3	no	n	public	633:3
625	3	no	n	private	625:3
585	11	no	y	private	585:11
562	3	no	y	public	562:3
558	6	yes	y	private	558:6
551	1	no	y	public	551:1
503	2	no	y	public	503:2
421	1	no	y	private	421:1
384	5	yes	y	private	384:5

Table B.2: General Characteristics of 36 US FTMBA Program Respondents and Business Librarian Support

# of MBAs (US News)	# of librarians available to support MBAs	Public/Private	Librarians have a Formal Role with FBL?	Business Library Reporting			Business Library Location			Business Library Funding		
				Business school	Central Library Admin.	Other	Business school	Main Library	Other	Business school	Central Library Admin.	Other
886	5.5	public	yes	x			x			x		
708	3	public	yes		x		x					
558	6	private	yes			x			x			
384	5	private	yes			x		x		x		
313	2	private	yes		x		x				x	
230	3	public	yes		x		x			x		
212	1	public	yes		x			x			x	
1867	11	private	no	x			x			x		
1711	6	private	no		x			x			x	
1270	4	private	no		x		x				x	x
1181	3	private	no		x			x			x	
1047	3	private	no		x			x			x	
876	3	private	no	x			x			x		
825	5	private	no	x			x			x		x
812	6	private	no		x		x				x	x
633	3	public	no	x			x			x		
625	3	private	no		x			x			x	
585	11	private	no		x		x				x	
562	3	public	no	x				x				
551	1	public	no		x			x			x	
515	1	private	no		x			x			x	
503	2	public	no		x		x			x		
421	1	private	no		x			x			x	
392	2	public	no		x		x				x	
341	4	private	no		x		x				x	
283	4	public	no		x		x				x	
249	3	private	no		x			x			x	
236	3	public	no		x		x				x	
223	3	private	no		x		x			x		
200	1	private	no		x			x			x	
195	3	public	no		x			x			x	
159	4	public	no		x		x			x		
123	2	public	no		x		x			x		
123	4	public	no		x		x			x		
95	1	public	no		x			x			x	
93	2	public	no		x			x			x	
Totals				6 (17%)	28 (78%)	2 (6%)	20 (56%)	15 (42%)	1 (3%)	12 (33%)	21 (58%)	3 (8%)

Appendix C

Results from 1-50 school online survey – 36 responses

Survey Question 1 and 2: Which of these statements applies to your reporting relationship with your institution?

		Response	%
1	Report to and funded entirely by the business school	5	14%
2	Located in the business school but reporting to, and funded by, the central library administration	7	19%
3	Located within the main library and report to, and funded by, the main library	14	39%
4	Located within the main library and report to the central library administration and Business School Dean, but funded by the business school	1	3%
5	Other (see comments below)	9	25%

Other reporting structures:

Report to business school. Funded by private trust.
Located in the business school and report to the central library administration. Co-funded by business school and central library.
Located in and funded by business school library (which functions as part of the main library)
Located and funded by the business school, and reporting to the library administration.
Located between the business and engineering schools, are funded by both schools, report to central library and both schools.
We also have access to some financial support from the business school.
Branch library reporting to and funded by the central library administration. Located across the street from the b-school not in the building itself.
Located in the main library and the business school; and report to and funded by the central library administration.
Report to and completely funded by the business school but also report to the head of reference and head of collection development at the main library.

Survey Question 3: Does your library have a formal role in the support of experiential field-based learning curriculum at your school?

Answer	%	Count
Yes	19%	7
No	81%	29
Total	100%	36

Survey Question 5: How does the library work with your school's experiential field-based learning projects? (Check all that apply.)

Answer	%	Count
On demand reference librarian help, as provided to any other library customer.	94%	34
Creates generic web guides with lists of recommended secondary sources (e.g. company and industry sources), not tailored to specific projects.	58%	21
Creates separate web guides with lists of recommended secondary sources targeted to the needs of each team project.	44%	16
Provides optional workshops on research as part of experiential field-based learning projects support.	36%	13
Provides required formal instruction on research as part of experiential field-based learning projects support.	28%	10
Each project team has a designated librarian to provide guidance on locating and gathering information.	28%	10
Librarians participate in judging project presentations.	11%	4
Other ways librarians at your school are working with these projects? Please describe in the space provided:	31%	11

Q5- Additional Comment - Other ways librarians at your school are working with these projects?
Librarians are invited to attend project presentations as observers.
We do not
We create a Word document that provides resources based on specific projects and that document gets posted to Canvas.
Each project team has a designated librarian who meets with the team in a one-shot session tailored to that team's project. Though the team is encouraged to work with that librarian in the future, the team is not required to do so.
Create videos on recommended resources
Librarians curate and deliver weekly news updates based on field locations; participate in the field experience (in the role of program managers); develop material to help students learn more about the social and business culture of the regions where they will be traveling; create country specific postcards with resource recommendations and QR codes that link to the related online product.
Provide background "fact packs" to student engagement programs to accelerate their efforts.
Direct outreach to staff and faculty involved with projects to raise awareness of the availability of assistance from the library with specific projects.
A branded research consultation service, promoted by the libraries and some MBA faculty. More structured than an on-demand reference interaction, usually more long-term.
Just to add to the on demand reference response, in addition to typical market research (company & industry, etc.), I also find myself providing patent & trademark research assistance with many MBA groups.

Survey Question 6: During field-based projects when do most teams come to get assistance from librarians? [Select only one response.]

Beginning of the project	17%	6
Middle of the project	8%	3
Towards the end of the project	0%	0
Repeatedly throughout the length of the project	22%	8
There is no standard pattern on when they come for assistance.	50%	18
They don't come for assistance.	3%	1
Total	100%	36

Survey Question 7: When the librarian supports a team working on a field project, who is he or she typically working with?

Answer	%	Count
Usually one team member who is the designated research lead for the team.	11%	4
Usually the whole team.	28%	10
Usually different members of the team individually.	6%	2
No standard way in terms of who in the teams interacts with the library in getting support.	53%	19
They don't request assistance from librarians.	3%	1
Total	100%	36

Survey Question 8: Do you ever meet with the whole project team to provide information gathering guidance?

Answer	%	Count
Never	3%	1
Rarely	11%	4
Sometimes	42%	15
Often	39%	14
Always	6%	2
Total	100%	36

Survey Question 9: Is providing support and guidance for experiential field-based learning projects included as part of the formal performance reviews of librarians?

Answer	%	Count
Yes	22%	8
No	78%	28
Total	100%	36

Survey Question 10: In the past five years have your job responsibilities changed to accommodate support for experiential learning projects?

Answer	%	Count
Yes, Please describe these changes:	11%	4
No	89%	32
Total	100%	36

If Yes, Please describe these changes:

Yes, we have to juggle schedules and workloads in order to successfully deliver the weekly newsletters which begin about 8-10 weeks pre-trip. We've also started providing more research drop-in sessions specific for these student teams
We work more closely with our student project teams and have a routine process in place, including KM support.
We have expanded the number of people to support experiential learning projects at our library - driven in part by an increase in the number of teams we need to support.
As the experiential project become more specific and finely tuned to individual company's needs, I've had to increase my knowledge and awareness of resources. In particular, resources that are international in scope and that have city/regional-level information or data.

Survey Question 11: Are there positions other than business librarians that directly work with field-based projects in the MBA program to support information gathering and analysis?

Answer	%	Count
Yes	28%	10
No	61%	22
Not sure	11%	4
Total	100%	36

Survey Question 12: If you said yes, approximately how many people are in these different roles?

2
5
Three
1
We have several different programs. Generally one person per program. There is generally a small budget for data acquisition and this is what these people assist with since the library does not have a budget to purchase data for these projects.
3
4 team members which include staff
7
2-17
5

Survey Question 13: If you said yes, what are the job titles of these roles?

science librarians
social science librarians, science librarians, engineering librarians
Forestry and Environmental Studies Librarian, Government Information Librarian, Engineering Librarian
Director of Startup Consulting program
Associate Director
Information Assistants
staff
ILL, Technical Services, Business Communications
2 assistant librarians, each team gets at least 1 faculty advisor
Subject librarian (may be in Engineering, Sciences, Medical, or other depending on the project/industry)

Survey Question 14: When you are working with students on field-based projects how often do you help them with these information functions?

	Don't know	Never	Rarely	Sometimes	Often	Always	Total Responses
Breaking a problem apart - Ability to break apart a problem effectively to identify the questions that will need to be answered and where sources to answer those questions might be.	0	2	2	16	12	3	35
Confronting information gaps – Approach what can't be found constructively in terms of possible alternative ways to answer the question.	0	0	0	10	17	8	35
Contextual Intelligence – Ability to identify facts connected with the past and/or present situation.	4	1	3	12	13	2	35
Creative Intelligence – Use information gathered to consider or predict “what could be.”	1	4	4	16	10	0	35
Problem Finding – Use information gathered to explore potential risks.	1	6	4	13	11	0	35
Integrative Thinking – Consider multiple options from diverse sources and effectively synthesize information.	1	3	3	13	8	7	35
Time management and resource allocation – Implement an effective plan for doing and delivering the work.	0	14	12	4	2	3	35
Balanced use of types of evidence - Effectively balance the use of primary vs. secondary information sources.	1	4	8	15	2	5	35
Credibility - Assess factors regarding the creators of information to determine its credibility.	0	1	2	6	15	13	35
Evidential Responsibility – Document referenced sources and present information that clearly communicates and demonstrates authority and credentials concerning a point of view.	0	4	4	7	9	11	35
Copyright - Appreciate issues around copyright and fair use in the proper use of information.	0	1	7	10	11	6	35

Survey Question 15: Please indicate who assists the MBA students in the following information related functions when they are working on experiential field-based learning projects.

Question	Librarians		Faculty member advising project		People at the project's company or sponsor organization		Student project team members		Other support roles		Not supported		Don't know		Total
	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	
Breaking a problem apart - Ability to break apart a problem effectively to...	71%	25	74%	26	26%	9	63%	22	17%	6	0%	0	9%	3	35
Confronting information gaps - Approach what can't be found constructively...	86%	30	54%	19	20%	7	54%	19	14%	5	0%	0	6%	2	35
Contextual Intelligence - Identify facts connected with the past and/or pre...	63%	22	60%	21	34%	12	57%	20	6%	2	6%	1	12%	4	35
Creative Intelligence - Use information gathered to consider or predict ...	60%	21	60%	21	34%	12	54%	19	9%	3	0%	0	14%	5	35
Problem Finding - Use information gathered to explore potential risks.	37%	13	63%	22	46%	16	66%	23	6%	2	0%	0	14%	5	35
Integrative Thinking - Consider multiple options from diverse sources and e...	63%	22	46%	16	23%	8	60%	21	3%	1	0%	0	14%	5	35
Time management and resource allocation - Implement an effective plan for d...	23%	8	54%	19	11%	4	54%	19	14%	5	0%	0	26%	9	35
Balanced use of types of evidence - Effectively balance the use of primary...	60%	21	52%	18	11%	4	46%	16	6%	2	0%	0	17%	6	35
Credibility - Assess factors regarding the creators of information to deter...	86%	30	49%	17	6%	2	37%	13	3%	1	0%	0	6%	2	35
Evidential Responsibility - Document referenced sources and present informa...	66%	23	40%	14	3%	1	46%	16	3%	1	0%	0	14%	5	35
Copyright - Appreciate issues around copyright and fair use in the proper u...	89%	31	6%	2	0%	0	29%	10	0%	0	0%	0	6%	2	35

Survey Question 16: Is there any additional information you would like to add about experiential field-based learning projects and the role of business librarians at your school?

Had to answer "don't know" to all "who assists" questions. The students come to the libraries for help when they need it, but beyond that we are not involved in the program enough to know how every student gets assistance.
As the solo business librarian I worked closely with the MBA+ program and Texas Venture Labs programs. The position has always supported these programs. It is not included separately in the evaluation but I do mention work I do for them in the narrative.
it is extremely interesting; it is one of our biggest success stories enabling us to partner and collaborate with faculty and students; it has contributed to librarians being seen as part of the student teams and their community; it has greatly increased our visibility and value
This is a core role for us. Expectations placed on the librarians by the programs we support can be difficult to meet due to timing of expected consultations. Some programs also have difficulty placing the required library consultation at the best time for the team. Rather than have timing that maximizes the team's needs, the consultation is scheduled during the best time for the program. Even if that might mean the night before a major exam. This relationship, across multiple programs, is a work in progress and ever-improving.
No formal process. Students contact members of the reference team, or our head of reference through email. In response, the staff responds. Head of reference makes videos of recommended resources. We do not do anything as involved as itemized here
I don't really see how most of the categories above relate to a librarian's usual role - also it's unclear what defines an "experiential field-based learning project". I talk to various classes that are working on real-world projects - startups, consulting, etc. - are they all "experiential field-based"? So my answers to these questions are relatively uncertain.
I have been able to be a partner in planning and supporting student success with experiential learning, particularly with a very popular elective in which teams of students consult companies on problems in international locations. Once the list of companies and initial problems have been determined, I am able to do some quick research into them to anticipate what the students' needs will be.
Experiential learning has just been added as a undergrad requirement here and I am sure it will be bumped up the graduate level soon too.
A team of ...faculty and certain staff decide which projects will be accepted for our Action Learning Projects. They pick projects where students will gain the most experience and are able to put what they have learned into practice. Many times the companies come from industries that niche industries or where [our] university has no focus so finding information is a challenge. I am also amazed at the lack of information the companies can or will give the students (we sign confidentiality agreements-even me sometimes). Sometimes they don't have the information but sometimes I feel sure it has been collected and they just do not want to give it or don't know who has it. I also find they can sometimes expect the school to pay for rather expensive data sets. Our part time students do a Capstone which deals with projects for nonprofits—that has been a challenge.
Since I'm not with the groups as much as I wish Q15 are my impressions.
Mostly what we see of these types of projects are MBA students (including Full-Time, Executive, and Professional MBAs) doing their capstone projects, where they will work with an existing company. But we also see most, if not all, of the Full-Time MBA students during the annual 2-week MBA Venture Challenge where they research and analyze a start-up company before delivering an elevator pitch in front of a panel of judges. They are to make a clear, unbiased and business-oriented evaluation of the firm's market and financial viability. We see many students during those 2 weeks needing help finding the tools to do their market research, and in some cases, to help with patent research. Something else to note: our librarian who is the liaison to the Full-Time MBA Program presents every year in late summer/early fall when new MBAs arrive, letting them know a little about the library and its resources.
As a brand new business librarian..., I recently wrote up a brief and informal strategic plan about the business librarian as management consultant—some of the same points I proposed are referenced in your questions and project. Would enjoy having the opportunity to talk more with you about your thoughts on this – sounds like a great project.
The Librarians support the information needs of the student teams. In addition, we participate in curriculum discussions about the program at our school.
Each field study team meets with a librarian for project-specific instruction. This leads to ongoing follow-up with many teams throughout the field study period.
Librarians are formally embedded into each project team and provide research support to the team to successfully complete their project.