S T A Y I N G S M A R T: How Today’s Graduates Continue to Learn Once They Complete College BY ALISON J. HEAD, PH.D. PROJECT INFORMATION LITERACY RESEARCH REPORT THE PASSAGE STUDIES JANUARY 5, 2016 PROJECT INFORMATION LITERACY http://projectinfolit.org THE UNIVERSITY OF WASHINGTON INFORMATION SCHOOL RESEARCH SPONSORED BY THE INSTITUTE OF MUSEUM AND LIBRARIES (IMLS) Abstract: This report presents findings about the information-seeking behavior of relatively recent college graduates used for lifelong learning in personal life, the workplace, and the local communities where they lived. Included are results from online surveys of 1,651 respondents and telephone interviews with 126 study participants who graduated from one of 10 US colleges and universities between 2007 and 2012. Findings indicated that most graduates needed to learn a combination of basic and complex life skills during the past year, such as money-management, how to make household repairs, and how to advance in their careers and communicate better on the job. They consulted friends, family, and coworkers almost as much as the Web. Graduates preferred information sources that had currency, utility, and interactivity. They also placed a high premium on curated information systems that were organized and kept up-to-date, such as libraries, museums, and bookstores. A model of shared utility is introduced for explaining graduates’ use of contemporary social media technologies as well as personal connections they had established with trusted allies. Graduates reported four barriers to their continued learning efforts: lack of time, finding affordable learning sources, staying on top of everything they needed to know, and staying motivated to keep learning after college. As a whole, graduates prided themselves on their ability to search, evaluate, and present information, skills they honed during college. Yet, far fewer said that their college experience had helped them develop the critical thinking skill of framing and asking questions of their own, which is a skill they inevitably needed in their post-college lives. Ten recommendations are presented for improving educational strategies, resources, and services that foster lifelong learning. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 2 Introduction Jessica received her baccalaureate degree in finance from one of the best schools in the US in 2010.1 The endless hours she spent studying had paid off. Unlike many of her classmates struggling to find entry-level career jobs in the worst job market for college hires in 20 years, she quickly landed a good job. 2 She put the books away and focused her energy on doing rather than learning. Like most of today’s young graduates, Jessica soon discovered that questions do not end with college assignments. Real life requires constant learning. Within months of leaving campus, she found herself needing to figure out how to schedule student loan payments, negotiate a salary increase, brush up on a couple of spreadsheet functions, plan a sightseeing trip to New York, and learn how to cook for herself. Without a second thought, she grabbed her iPad, did a Google search, and visited the sites she usually frequented, like YouTube, Pinterest, and Hipmunk. She also turned to a trusted friend for advice. These are the tools for lifelong learning in the 21st century, a flood of Internet- and humanmediated sources that help recent graduates solve basic to complex information problems. Even though Jessica, and others in the Google Generation, may have more information outlets than all previous generations combined, today's graduates are finding that staying informed, knowledgeable, and skilled may be more daunting than ever before. Adding to this challenge, most graduates fight to carve out time to keep learning. Some cannot afford the expertise they want from professionals like contractors, attorneys, accountants, or career advisors. Others have trouble staying motivated to learn everything they think they should know to stay current, given the sheer volume of information they can access in physical and virtual domains. This “information transition” from college to real life may be one of the least understood challenges of the digital age. Project Information Literacy (PIL) is a national series of ongoing research studies about how today’s college students and recent graduates find and use information for solving information problems they encounter.3 This PIL report is the last in a series of special reports called “The Passage Studies.” The purpose of these unique studies has been to investigate the information transitions that early adults undergo at critical junctures in their lives. We sought to understand the information competencies and strategies they adopt and develop as they move from one complex information landscape to the next. In this latest study, we turn our attention to lifelong learning. 4 We conducted a two-year study of the continued learning needs and information-seeking practices of today’s relatively recent college graduates in their personal and professional lives. 5 1 “Jessica” is a composite character based on results from interviews with recent college graduates in our sample. 2 Hilary Wething, Natalie Sabadash, and Heidi Shierholz., “The Class of 2012: Labor Market for Young Graduates Remains Grim,” Economic Policy Review, Briefing Paper #340 (May 2012): 9, http://www.epi.org/publication/bp340-labor-market-young-graduates. 3 Project Information Literacy (PIL) is an educational nonprofit dedicated to conducting ongoing research about young adults and their research habits in the digital age. Alison J. Head, Ph.D., a Research Scientist in the University of Washington Information School and a Research Fellow at the metaLAB (at) Harvard, founded and directs PIL. Communication about this report should be sent to Dr. Alison J. Head at alison@projectinfolit.org. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 3 In fall 2014, we administered an online survey to a sample of 1,651 respondents from 10 US colleges and universities, who had graduated between 2007 and 2012.6, 7 We also conducted 126 in-depth telephone interviews with study participants from the same institutions to collect qualitative data about graduates' views, experiences, and motivations as lifelong learners. Each of the colleges and universities in our institutional sample was located in one of the top 25 fastest-growing areas in the US where today’s college-educated graduates in their mid-to-late 20s live. As part of our investigation, we examined whether these metropolitan areas may have graduates who are more avid information seekers than other locales. The next section contains a summary of the study’s highlights. The remainder of the report features a discussion of findings, a model of the graduates’ lifelong learning process, and 10 recommendations for improving services and resources for continued learning. Major Findings Today’s college campuses are awash in data about their students. From campus servers piling up posts from online discussions to detailed assessments of information literacy learning for any given cohort, the learning needs—and wants—of students are documented more extensively than ever before. When students graduate, however, this data stream slows to a trickle. Alumni associations track former students for promotional and fundraising purposes. Campus career centers monitor where graduates are employed to broaden their own collection of internship opportunities for current students. In other cases, ad-hoc committees have interviewed or surveyed former students about their undergraduate learning outcomes.8 While the data collected may be useful for evaluating post-college career progress, they only scratch the surface as far as assessing the learning needs today’s recent graduates may have after college. Subsequently, very little is known about the everyday information worlds of today’s graduates. When asked about their information needs and challenges, the recent college graduates we studied said they spent a lot time learning career development tips and scrambling to improve their interpersonal communication and technical workplace skills. However, what kept them most busy during the past year was learning a mix of simple and complex life skills they needed outside the workplace. As they put their college days behind them, many graduates needed to learn how to manage their money or pick up an array of quick-fix solutions to everyday problems, like how to make household repairs, how to pay taxes, or shop for groceries on a budget. 4 This PIL study was generously supported with a two-year National Leadership Grant (LG-06-13-0186-13) from the Institute of Museum and Library Services (IMLS), http://www.imls.gov. 5 For a complete discussion of methods used for this study, see Appendix A of this report. 6 For all three phases of this study, the sample comprised the same 10 institutions of higher education in the US. Nine of these schools were four-year institutions, where graduates had received a baccalaureate degree, e.g., BA or BS. The remaining school in the sample was a community college, where graduates had received either an associate degree (AA) or a certificate. For a complete list of the institutions and details, see Appendix A: Participants. 7 We are grateful to the PIL Research Team members who conducted telephone interviews and contributed to this study’s findings: Sarah Evans (University of Washington), Kate Faoro (University of Washington), Michelle Fellows (University of Washington), Kirsten Hostetler (Central Oregon Community College), Ann Roselle (Phoenix College), and Michele Van Hoeck (California Maritime Academy). 8 For a recent example of a national study about graduates’ learning outcomes, see: Gallup, Inc., Great Jobs, Great Lives: The 2014 Gallup-Purdue Index Report, (2014), http://www.luminafoundation.org/files/resources/galluppurdueindex-report-2014.pdf. …very little is known about the information worlds of today’s graduates. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 4 Others began building a learning network they could tap for guidance and advice they needed in their professional and personal lives, and to a lesser extent, in the communities where they lived. Most graduates said they were surprised by how little they knew about living on their own. Predictably, recent graduates were heavy users of Google search. They also relied on an array of sources such as Facebook, YouTube, Pinterest, The New York Times, best-selling books, online forums, blogs, and to a lesser extent, public libraries and bookstores. Graduates turned to friends, family, and coworkers almost as much as the Web. When weighing life’s most important decisions, such as deciding whether to buy a house, become a first-time parent, or change jobs, one-on-one discussions with a trusted confidant won out over sources they might be able to find on the Web. As a whole, graduates preferred resources for lifelong learning that have three information qualities: currency, utility, and interactivity. They placed a high premium on lifelong learning systems that were organized, curated, up-to-date and where there was available assistance, as in the case of librarians and knowledgeable staff. For young graduates, information utility meant sources that were useful, credible, relevant and directly and immediately applicable to the real problems in their lives. Interactivity entailed more than a Google search—it encompassed the validity and richness of solutions that come from multiple voices that can all join in, interact, or exchange ideas and information in a social space. Most graduates prided themselves on being savvy information evaluators, competencies they honed during college. Yet, the large majority believed that formulating and asking their own questions was the one skill that they had not developed in college but found they needed in their post-college lives. Summarizing the major findings from our interviews and survey: 1. Today’s young graduates have a diffuse set of needs after college that compels them to acquire additional competencies, strategies, knowledge, and skills. A breakdown of their learning needs indicated they had more needs in their personal lives (57%) than in the workplace (30%) and in their communities (13%). 2. More than anything else, graduates sought how-to information (75%): quick fixes to urgent problems in their personal lives. The graduates we interviewed said they needed to learn such things as how to cook, how to make household repairs, or how to read a legal agreement. 3. Over two-thirds of the survey respondents (69%) wanted to close gaps in their knowledge about managing money and their personal finances, often for the first time. Graduates said they needed to find out how to set up a personal budget. Others grappled with scheduling student loan payments. Still others had to plan a weekly food budget. 4. When it came to the workplace, more than anything else, young graduates wanted career and professional development guidance and information (69%). Most said they were steadfast in their search for information about new positions and opportunities in and beyond their current place of employment. 5. At the same time, more than half of the graduates (56%) needed to expand their interpersonal communication skills in their jobs, especially for engaging conversations with, and delegating tasks to, workers older than themselves. 6. One in four of the graduates wanted to learn how to become involved in their communities, especially how to and participate in civic life (25%); slightly fewer sought volunteering opportunities (24%). Graduates turned to friends, family, and coworkers, almost as much as the Web. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 5 7. Search engines—especially the ubiquitous Google—were the go-to source for quickly connecting graduates to individual pages on social sources like Facebook, YouTube, or Pinterest, especially for information in their personal lives (88%), the workplace (83%), and to a lesser extent, their community (38%). 8. Almost three-fifths of the graduates (56%) relied on blogs for guidance and how-to specifics they could put to use in their personal lives. Blogs were a good source of low-cost information (71%), current and up-to-date information (69%), and provided good summaries of the topics (61%) of interest to many graduates, according to respondents who had used blogs in the past year. 9. Nearly half the graduates (45%) had used a public library in the past year when seeking information sources for use in their personal lives. In a follow-up analysis, we found that public library users were three times more likely to be bookstore visitors and museumgoers. 10. Finding sources for continued learning did not end with a Web search. A large majority (84%) of respondents had approached coworkers in the past year to informally learn the skills they needed to succeed on the job and to advance their careers. 11. Despite the widespread promise about online learning, few respondents reported using formal learning sites such as Coursera (14%), edX (5%), or Udacity (2%) in the past year. Instead, far more used informal learning sites that required less of a time commitment, such as YouTube (79%) and Pinterest (51%). 12. Graduates found it difficult to stay informed in the rapidly changing digital age. A majority said it was hard to find the time for continued learning (88%), locate affordable sources (73%), stay current, given the volume of information “out there,” (70%), and stay motivated to keep learning (62%). 13. Half of the sample (50%) reported being frustrated by no longer having access to their former instructors and lectures as well their campus library’s databases, such as ProQuest, JSTOR, or EBSCO. Far fewer had accessed open access government databases (13%), like ERIC or PubMed, in the workplace (27%) or in their personal lives (13%). 14. Most, though not all, of the critical thinking skills learned and developed during graduates’ college experiences were adapted in their post-college lives. A large majority of the graduates believed they had transferred information skills from college for interpreting and applying search results (76%) and reflecting on the ways they learned best (74%). Yet, far fewer—less than a third (27%)—agreed that college had helped them develop the ability to formulate and ask questions of their own. Taken together, these findings suggest that colleges and universities are turning out graduates who are specialized, employable, and relatively proficient information seekers. Yet, our results also reveal a failure of higher education to prepare lifelong learners who leave college experienced at framing and asking their own questions rather than responding to questions that had been assigned to them. In the following pages, we present detailed findings and a lifelong learning model in four parts: Part One: Lifelong Learning Needs. Findings are presented about the continued learning needs today’s recent graduates find they have after college in their personal lives, the workplace, and in the communities in which they live. …public library users were three times more likely to be bookstore visitors and museumgoers. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 6 Part Two: Lifelong Learning Sources. Findings are featured about the information sources from bookstores and libraries to Web 2.0 sites and friends and family that recent graduates rely on for continued learning and to stay fulfilled and enriched in their personal and professional lives. Part Three: College Takeaways. Findings are presented about the skills and competencies recent graduates have adapted from college for navigating the information universe of their post-college lives. Challenges graduates faced with continued learning are also provided. Part Four: Modeling the Lifelong Learning Process. A model of shared utility is introduced for describing the lifelong learning process employed by recent graduates. Throughout this report, the results of our research reveal consistent patterns from respondents that lend credibility to our findings. These results show how a sample of today’s recent college graduates find, use, and evaluate information to meet their continued learning needs once they receive their degrees and go on with their lives. Given the size of the sample and our research methodology, these findings should not be viewed as comprehensive and generalizable to all recent graduates in the US, but rather as exploratory and as another part of our ongoing research. ! Approach Project Information Literacy studies are grounded in research on information-seeking behavior. As information scientists, we focus on the ways in which people of various ages find, evaluate, and select information and the processes they use to meet their information needs. These processes are investigated through participants’ accounts, reports, and experiences. We use social science research methods—interviews and surveys—to collect and analyze data. The purpose of this study was to investigate continued learning after college. We focused on three arenas in which continued learning needs arise and occur in recent graduates’ lives: personal life, the workplace, and the communities where they lived. We examined the information-seeking behavior recent college graduates used for continued learning in the 12 months preceding the survey; beginning with the learning needs they had and then turned our attention to the information sources on which they relied. Five questions framed this study: 1. What information needs do today’s college graduates have for improving skills and adding to their knowledge or competencies after they leave campus and settle into their personal lives, the workplace, and their local communities? 2. What information sources do recent graduates use for finding information about personal fulfillment and cultural enrichment, career development and staying employable, and for becoming involved in civic affairs and their local community? 3. How do today’s graduates use the myriad of sources for continued learning available from traditional information systems, like public libraries, job training sessions, bookstores, and museums as well as Web 2.0 sources, such as blogs or MOOCs? 4. What critical thinking skills and information literacy competencies learned or developed in college are adapted and applied by young graduates in their personal and professional lives? Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 7 5. How can the information-seeking process for lifelong learning be modeled? Given this model, what solutions for improving learning services and resources are feasible for meeting their needs? These questions are posed at a critical juncture in the lives of the young college graduates living in the digital age. The global economy demands a constant retooling of skills and updating of expertise in order to stay adaptive and employable. Moreover, the sheer availability of online learning outlets has increased societal expectations to keep up to speed, relevant, and valued. For most young graduates, staying informed and current in today’s world can be more challenging than ever. Defining Lifelong Learning For the purposes of this study, we have used the phrases lifelong learning and continued learning interchangeably to define the activity of ongoing learning for improving skills and acquiring additional knowledge or information. 9 This kind of continuous learning occurs online as well as in brick-andmortar settings and it can and may occur in the in personal life, the workplace, and community and civic life. Today, lifelong learning is an ongoing pursuit that can take place in formal, non-formal, and informal exchanges. A key distinction among these different modes is whether curricula are used and learners receive credits for participation. Two of the three modes of lifelong learning—formal and non-formal— are found in schools or in the workplace. Formal learning consists of education and training in an institutional context. It is guided by a curriculum in which diplomas or certifications are awarded upon completion. Non-formal learning takes place in lessons, discussions, and trainings, such as in the workplace or through extension courses. A difference however, is that non-formal educational opportunities do not result in credits, degrees, digital badges, or certificates. The third mode of learning—informal learning—is incidental, voluntary, and often experiential. It occurs when self-motivated individuals learn independently to advance their knowledge and skills. For instance, informal learning can occur in communities of practice, where interactions are highly contextualized. The scholarly literature defines lifelong learners as curious, flexible, motivated, and reflective.10 Despite what these learners’ motivations may be, the pathways to learning venues are not always available, accessible, and affordable. Moreover, the level of skills and strategies that these learners bring to the process of finding and using information can be a critical barrier to their success in finding learning opportunities and to actually gaining skills and knowledge. To better understand these competencies and what today’s graduates bring to their continued learning efforts, we used the lens of information literacy. 11 Today, in the “information society,” numerous 9 As part of this two-year study, we conducted a recent literature review of lifelong learning and participation. See: Alison J. Head, Michele Van Hoeck, and Deborah S. Garson, “Lifelong Learning in the Digital Age: A Content Analysis of Recent Research on Participation,” First Monday, 20, no.2 (February 2015): http://dx.doi.org/10.5210/fm.v20i2.5857. 10 Christopher Knapper and Arthur J. Cropley, Lifelong Learning in Higher Education, (London: Kogan Page, 2000); Paul R. Pintrich and Barbara Schrauben, “Students’ Motivational Beliefs and Their Cognitive Engagement in Academic Classroom Tasks,” in Student Perceptions in the Classroom, eds. Dale H. Schunk and Judith L. Meece (New York: Routledge: 1992), 149–175. 11 For a current report that defines information literacy in the context of higher education, see Emma Coonen, A New Curriculum for Information Literacy, Theoretical Background: Teaching Learning: Perceptions of Information Literacy (Cambridge: Cambridge University Library, 2011), http://ccfil.pbworks.com/f/emma\_report\_final.pdf. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 8 situations arise daily, requiring competencies of exchanging, seeking, retrieving, applying, and evaluating information and a high degree of information literacy is required throughout life. For instance, individuals need to continue to learn and grow to navigate daily life, to remain employable and to renew and update their professional skills and knowledge, and to be active in their communities and enriched in their personal lives. These information-seeking competencies and lifelong information literacy strategies determine whether or not these efforts will be successful. We define competencies as the skills and knowledge needed for finding and using information, especially what action needs to be taken to execute a task and how to perform an action. These strategies are deliberate plans that are often highly individualized and focused on achieving an objective (within time constraints, resource availability, and cognitive abilities). Ultimately, the purpose of this study was to investigate recent graduates' information-seeking behavior for lifelong learning, while making recommendations for improving services in higher education, public libraries, and K-12 settings to better meet their needs. We collected data for this inquiry by conducting in-depth qualitative interviews and administering a large-scale online survey to a sample of recent college graduates from between 2007 and 2012. ! Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 9 Detailed Findings Part One: Lifelong Learning Needs As information scientists, we began our study by asking the following question: What situational learning needs do today’s recent graduates have for taking care of business in their personal lives, staying competitive in the workplace, or getting involved in local community activities and meeting people? We constructed a survey instrument with a question that collected data about 16 separate learning needs. In the survey, we defined learning needs as the additional skills, expertise, or knowledge that graduates had needed to acquire in the past 12 months. 12 As a first step, we examined the relationship between continued learning needs in each arena and in survey respondents’ lives (i.e., personal life, the workplace, and local community). A graphic with these results of this analysis appears in Figure 1. Percentages based on the 21,838 “check all that apply” responses from total n = 1,651 recent graduates. As Figure 1 shows, graduates reported having a larger percentage of learning needs for personal enrichment and fulfillment (57%), than for the workplace (30%), or in the communities in which they lived (13%). Initially, we were puzzled by these results. Even though a majority of interview participants in our preliminary interviews discussed learning needs they had for the workplace, the quantitative survey results—and responses from a much larger sample—suggested otherwise. This result raised additional questions central to our research. What continued learning needs did survey respondents have in their lives, and how did those needs differ? What possible explanations could account for these differences? Moreover, what major learning needs did graduates have, extending across their personal and professional lives? 12 The list of learning needs that we used in the survey was based on the different needs articulated by graduates during our study’s Phase One preliminary interviews. Personal Life 57% Community 13% Workplace 30% Figure 1: Continued Learning Needs across All Three Arenas Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 10 To report on answers to these questions, we divided the first part of the report into four sections with findings about continued learning needs graduates had in their personal lives, workplaces, and communities of residence. We concluded with a fourth section that examines major learning needs across all three of these arenas. 1. Learning Needs: Personal Life The concept of everyday life research was introduced 20 years ago in a study of adults living in a Finnish village.13 Researchers found that more participants spent time in their daily lives looking for practical information they could use for supporting the hobbies they enjoyed doing in their free time. In 2010, PIL conducted its own study of everyday life research. 14 Based on responses to a survey from 8,353 college students at 25 US campuses, we found that two-thirds of the respondents looked for information about making decisions directly related to their individual lives (i.e., purchasing something, health/wellness, finding a job, and trip planning). Together, studies like these help to understand information seeking in daily life. To expand on this prior research, we began our study by investigating the continued learning needs today’s recent graduates had in their personal lives. To collect the data, we used a matrix question with 16 learning needs and a “check all that apply” response format in our survey. In Figure 2, we present the data in a bar chart from most to fewest responses. (A complete data set of responses to this question appears as Figure 2A in Appendix E.) 13 Reijo Savolainen, “Everyday Life Information–Seeking: Approaching Information–Seeking in the Context of ‘Way of Life’,” Library & Information Science Research 17, no. 3 (Summer 1995): 259–294. 14 Alison J. Head and Michael B. Eisenberg, “How College Students Use the Web to Conduct Everyday Life Research,” First Monday 16, no. 4 (April 2011), http://dx.doi.org/10.5210/fm.v16i4.3484. The sample was 8,353 students. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 11 Figure 2: Learning Needs for Use in Personal Life Percentages based on total n = 1,651 recent graduates from 10 US colleges and universities and “check all that apply” responses. A complete data set of responses to this question appears as Figure 2A in Appendix E. Summarizing the findings about personal life and learning needs: 1. More than anything else, recent graduates (75%) needed to learn how-to specifics they could apply to solving pressing problems in their personal lives. In our follow-up interviews, graduates described needing additional life skills, such as repairing a household appliance, reading the fine points of a lease, or saving money on groceries. 2. Seven in 10 graduates (70%) wanted to pick up skills for hobbies they enjoyed in their spare time, such as practicing new pieces on a musical instrument, learning a foreign language, or expanding knowledge about their coding skills for Python or Java. 3. More than two-thirds of the respondents (69%) needed to learn how to manage money and their personal finances. Receiving a steady paycheck, which was often more than they had earned in college, required graduates to learn how to set up a personal budget, schedule student loan payments, manage other monthly bills, or pay income taxes. 4. Over three-fifths (63%) looked for consumer information. In follow-up interviews, graduates said making big-ticket purchases, such as buying a car, furniture, electronic devices, and health care plans required them to be well informed, especially when it came to price and quality. At the same time, six in 10 (60%) engaged in trip planning, such as finding inexpensive flights or hotel discounts. 5. About one in five in the sample (59%) needed to find housing. In our follow-up interviews, graduates told us that they were looking for rental apartments; far fewer were ready to buy their first home. 75% 70% 69% 63% 60% 59% 56% 48% 44% 42% 34% 30% 27% 26% 24% 23% 0% 25% 50% 75% 100% How-to information Hobbies Managing finances Making purchases Travel Housing Mobile devices Social contacts Interpersonal communication Licensed professionals Desktops and laptops Professional development Spiritual or religious groups Volunteering Civic action Working with children Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 12 6. The majority of graduates (56%) wanted to pick up new apps for smart phones and other mobile devices; far fewer (34%) needed information about using desktop computers and laptops for personal use. 7. Finding others who shared their interests through meetups or online dating was the kind of social contact that almost half the graduates (48%) in our sample had needed. 8. Two-fifths of the respondents (44%) wanted to brush up on interpersonal communication skills, like conflict resolution and being able to say no to friends. Some graduates said they needed quick fixes, while others wanted to learn about communication strategies in greater depth. 9. Many recent graduates (42%) reported that they looked for the availability and affordability of services from a licensed professional in the area where they lived, such as a physician, attorney, or accountant. 10. Finding out more about church or spiritual groups had been a need for slightly more than a quarter of the respondents (27%). Others needed to learn more about volunteering opportunities (26%) or participating in civic action (24%) to enrich their personal lives. Two major trends about learning needs emerged from this analysis. Above all else, nearly all of the graduates needed to learn how to live on their own and separate from the familiar campus culture. Second, their most specific need involved compensating for their lack of financial knowledge. Based on our interviews, we identified three types of how-to needs that graduates’ had: (1) domestic survival skills (including finance), (2) quick fixes, and (3) health and wellness information. For instance, some graduates described needing money-saving fixes like repairing a flat tire, installing a ceiling fan, or cleaning a clogged carburetor on a lawn mower. Others needed to master a combination of skills about managing their finances as their lives changed in significant ways: I moved across the country to a major city two days after graduation! I got married a short time later and we ended up buying a house. I've gone through a lot of situations where I've said to myself, “I got to learn all of this!" Family is always a resource for learning. But I also have a financial advisor at my bank that is a free service with my account. For me, it comes down to those conversations where I can say, “Hey, how do you do this, can you teach and show me?" If I'm given the opportunity to go online or go meet with someone to talk about something, I would like to talk to someone about my specific case, especially when it comes to finances. I can ask questions, get immediate feedback, instead of searching online. Other graduates said they had needed to acquire a great deal of knowledge about health disorders and learn how to help a loved one with a recently diagnosed illness. Still others said they needed domestic survival skills such as how to prepare meals and stretch their weekly grocery budget. As one graduate from a small university explained: When I was in college, I just got into the habit of going to the grocery store and picking out whatever looked good and not formulating meals. Shopping in terms of thinking about meals, having a list, using websites like Food Network, Chef Ina Garten, and The Barefoot Contessa to generate recipes that could come in handy for a longer period of time, like a two-week period, so that I knew how much food to buy. I had to learn how to cook and this was difficult, because I had to learn how to shop effectively, too. Taken together, we concluded that today’s college graduates have a diffuse set of learning needs— many of which involve building life skills, which they discovered they did not have in the first decade after they completed college. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 13 While much of their time was spent on finding domestic survival skills or quick-fix solutions, many of the graduates in our sample also had taken the time to dig into learning about something that had sparked their curiosity. Graduates tended to dig deep when making life decisions such as buying a house, making a career move, or starting a family. In the next section, we turn our attention to graduates’ learning needs in the workplace. We investigated how the graduates we studied stayed adaptive and competitive in their current jobs and in the career they hoped to pursue. 2. Learning Needs: Workplace The rising costs of college—tuition, books, and living expenses—gives the class of 2015 the unfortunate distinction of being “The Most Indebted Class Ever.”15 The average college student who took out student loans graduated with a debt of $35,000.16 Finding work after college and making money is not just the goal of going to college but by virtue of the cost of such an education, it is a stark necessity. In this study, the graduates we surveyed fared fairly well as far as finding employment. More than three-quarters of the survey respondents (77%) reported having full-time employment. A smaller percentage of graduates were self-employed (3%), working part-time (10%), or were currently unemployed (8%). 17 More than half of these respondents (55%) were working in the field they had majored in during college—slightly higher than the national average (Figure 3).18 Moreover, almost half the respondents were either currently enrolled in graduate school (20%) or had already received a graduate degree (28%). Percentages based on total n = 1,651 recent graduates from 10 US colleges and universities. Percentages do not add to 100% due to rounding. 15 Jeffrey Sparshott, “Congratulations, Class of 2015. You’re the Most Indebted Ever (For Now),” The Wall Street Journal, May 8, 2015, http://blogs.wsj.com/economics/2015/05/08/congratulations-class-of-2015-youre-the-most-indebted-ever-for-now/. 16 Ibid. 17 The remaining participants (1%) declined to state their employment status. Percentages do not add to 100% due to rounding. 18 James Marshall Crotty, “60% of College Grads Can’t Find Work in their Field. Is a Management Degree the Answer?” Forbes, March 1, 2012, http://www.forbes.com/sites/jamesmarshallcrotty/2012/03/01/most-college-grads-cant-find-work-in-their-field-is-a-managementdegree-the-answer/. Working in field studied in college 55% Working, but not in field from college 37% Not currently working 8% Declined to state 1% Figure 3: Working in the Field Studied during College? Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 14 In light of these employment details, we focused on continued learning for the workplace and ask how have recent graduates stayed professionally nimble and remained employable during the past year. We used data from a survey question with 16 learning needs to answer this question. The results are presented in Figure 4. Figure 4: Learning Needs for Use in the Workplace Percentages based on total n = 1,651 recent graduates from 10 US colleges and universities and “check all that apply” responses. A complete data set of responses to this question appears as Figure 4A in Appendix E. Summarizing the findings about the workplace and learning needs: 1. More than two-thirds of the respondents (69%) wanted to continue learning how to expand their career paths in the past 12 months. In our follow-up interviews, graduates discussed staying abreast of business statistics, changing industry standards, or new project management methods so they could remain valued, up-to-date, and ultimately, employable in what they considered to be their rapidly changing work settings. 2. A majority of the graduates (57%) wanted to gain more proficiency with desktop computers and laptops, especially in using spreadsheets or writing computer programs. Far fewer (32%) needed to learn about using mobile devices for supporting work tasks. 3. Over half of the respondents (56%) needed to improve their interpersonal communication skills for the workplace. Some graduates said they needed to learn negotiation and delegation techniques, especially for communicating with coworkers who were older than their collegeage peers. 4. One in four graduates (25%) spent time in the past year looking for strategies to develop a professional network. In our follow-up interviews, some graduates said they used sites like LinkedIn and Facebook to keep track of current and former coworkers for recruiting or finding job leads of their own. 69% 57% 56% 32% 25% 23% 21% 20% 18% 18% 14% 14% 12% 9% 9% 2% 0% 25% 50% 75% 100% Professional development Desktops and laptops Interpersonal communication Mobile devices Social contacts Managing finances Travel How-to information Licensed professionals Working with children Making purchases Civic action Volunteering Housing Hobbies Spiritual or religious groups Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 15 5. More than one-fifth of the graduates (23%) had honed their financial skills over the last 12 months. In our interviews, graduates working in specialized fields discussed the importance of remaining abreast of accounting standards, while others discussed learning new approaches to preparing marketing plans. 6. Just over one-fifth of the sample (21%) looked for travel information in the past year. Graduates discussed looking for sites with flight or hotel deals for business trips. As a whole, though, far fewer needed information for making purchases beyond airline tickets and hotel bookings in the workplace (14%). 7. Almost one in five of the respondents (18%) wanted to learn about working with children since they were in educational fields, as either students enrolled in graduate programs or new hires employed in teaching jobs. 8. Some graduates looked for ways they could get involved in local civic groups (14%) or volunteering opportunities (12%) through their workplace, though it was less common. In our follow-up interviews, some graduates discussed getting involved with local schools or engaging in company volunteer efforts to read to young children in after-school programs. The majority of the respondents identified three learning needs for the workplace during the past year: (1) professional and career development, (2) proficiency with desktop and laptop computer programs, and (3) expanded interpersonal communication skills. Many said they were challenged keeping up with the fast pace and demands of their workplace. They described having learning needs that were specialized and that kept them up-to-date and employable in their field. For instance, accountants and auditors said they needed more financial skills. New teachers needed to learn more about child development and working with children. Computer programmers had to brush up on technical skills for developing algorithms and writing code. As one interviewee, now working as a young research analyst, explained: The pace of technology is something that makes me continue to learn, especially in the workplace. Even some of the statistical programs that I was taught when I was in college are not used anymore. I learned SPSS but at work they use SAS and I'm still just getting my feet wet learning that program. But now I'm learning a program called R on my own now through Code School, because I think that's where it's all going. What you need to know for the workplace is always changing and you have to be proactive—you have to keep learning if you want to have attractive skills. At the same time, many recognized they needed a set of different interpersonal skills from those that had worked for them in college. No matter what field they were in, graduates we interviewed said that negotiation and delegation skills were essential to professional success. As one graduate, now working in the oil industry, explained: I always knew that diversity was important, but it wasn't really applied in college. While my college was pretty diverse, my major was a bunch of white men. Now, I'm working for an international organization, and I'm learning how other cultures and personalities accept and hear information—how I need to communicate the best. If you want to succeed in this company and do well, you have to perform. In college, you can get a B or C, but after you get a degree, if you can't perform in this industry, you get laid off. ...many graduates recognized they needed a set of different interpersonal skills from those that had worked for them in college. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 16 Within months of graduating, many of the graduates found out that continued learning was an integral component of staying employable. They also began to discover that the skills learned in college for working on desktop and laptop computers and specialized software packages had a relatively short shelf life in the fast-paced workplace.19 In the next section, we focus on how graduates learned about becoming involved in their local communities, especially building community ties. 3. Learning Needs: Local Community In past years, there has been evidence that today’s young adults do not engage in the public sphere beyond signing online e-petitions or “liking” a cause on Facebook. One study found that only a third of students enrolled in US higher education institutions believed that college had increased their commitment to civic involvement.20 Another report concluded the Google Generation voted less often than their older peers, paid less attention to politics, and was apathetic about their community.21 Still, a more recent report released in 2015 found almost half of US adults—at any age—are “interested bystanders.” 22 These are the individuals who stay on top of what is going on, but they do not express political opinions or take civic action, unless they have a personal or professional need at stake that aligns with their self-interest.23 Studies like these are a useful starting point for investigating the information-seeking behavior graduates used when learning about—and experiencing—their local communities. How much do these claims hold up? Specifically, what additional skills, expertise, or knowledge did recent graduates need to become involved in their local communities in the past year? Moreover, to what extent, do today’s graduates engage in community and civic life? To answer these questions, we used the survey question with 16 learning needs and our follow-up interviews. The results from the survey question appear in Figure 5. 19 The shelf life of the skills learned in college degree will be less than five years by 2020. See: Jeff Cobb, “The Other Education Crisis,” Evolution Shift Blog, March 28, 2013, http://davidhoule.com/evolutionshift-blog/the-shift-age/general/2013/03/28/the-other-education-crisis. 20 National Task Force on Civic Learning and Democratic Engagement, A Crucible Moment: College Learning & Democracy's Future, (Washington, D.C.: Association of American Colleges and Universities, 2012), https://www.aacu.org/sites/default/files/files/crucible/Crucible\_508F.pdf. 21 Krista Jenkins, Molly W. Andolina, Scott Keeter, and Cliff Zukin, “Is Civic Behavior Political? Exploring the Multidimensional Nature of Political Participation,” (paper presented at Midwest Political Science Association, Chicago, Illinois, April 3-6 2003), http://pollcats.net/downloads/JAKZMW2003.pdf. 22 Kate Krontiris, John Webb, Charlotte Krontiris, and Chris Chapman, “Understanding America’s ‘Interested Bystander;’ a Complicated Relationship with Civic Duty,” (Google Civic Innovation Team, June 2015), https://drive.google.com/file/d/0B4Nqm\_QFLwnLNTZYLXp6azhqNTg/view. 23 The Google study concluded that almost half of their survey sample (48.9%), made up of all ages, qualified as “interested bystanders.” Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 17 Figure 5: Learning Needs for the Local Community Percentages based on total n = 1,651 recent graduates from 10 US colleges and universities and “check all that apply” responses. A complete data set of responses to this question appears as Figure 5A in Appendix E. Summarizing the findings about local community and learning needs: 1. One in four respondents (25%) needed to learn about their local community in the past year to engage in civic life; slightly fewer (24%) reported needing to find local volunteering opportunities. During our follow-up interviews, some graduates acknowledged the importance of giving back to the community where they lived, while others said they had little time to contribute. 2. Some graduates had wanted to hone their interpersonal communication skills (16%) for engagement in local community activities, especially interacting with governmental agencies or grassroots organizations. Slightly fewer (14%) needed to find ways to reach out to other locals through online dating or meetups. 3. One in 10 respondents (10%) reported they had tried to learn more about religious and spiritual groups, with some graduates saying they had recently moved to a new town, and discussed needing to find a new church in their neighborhood. 4. Less than one-tenth wanted to learn about local resources for working with mobile devices (11%) or desktop computers (8%) or supporting hobbies (9%) or making purchases (5%). 5. Few respondents needed to learn about some of the practicalities of living in a new community, such as learning more about housing availability (10%) or finding qualified licensed professionals (8%), like physicians. 25% 24% 16% 14% 13% 11% 10% 10% 9% 9% 8% 8% 8% 6% 5% 3% 0% 25% 50% 75% 100% Civic action Volunteering Interpersonal communication Social contacts Working with children Mobile devices Spiritual or religious groups Housing How-to information Hobbies Professional development Desktops and laptops Licensed professionals Managing finances Making purchases Travel Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 18 Most graduates we interviewed were more involved in figuring out the daily necessities of living in a community—where to shop, dine, or see a movie—than they were with learning about civic causes or local volunteering opportunities during the past year. Some said a new job or family obligations kept them from joining. Others said they were interested in becoming more locally involved, but were uncertain about where to look. Still others said their interest in becoming involved was piqued as the 2016 presidential election grew closer. Among the small number of graduates that had become engaged in their communities during the past year, some had volunteered in homeless shelters. Others worked with children in after-school reading or athletic programs. Still others continued to learn about and be involved in a cause, such as legalizing marijuana or making their communities greener: Heck, yes, I’d say graduates do volunteer! As soon as I graduated from college, I moved to a different community and sought out the nearest environmental group and started volunteering 20 hours a week there like I had done during college, too. I founded a "green drinks" group here where I live now. I've sat on numerous boards, numerous steering committees—civic duty is a really important thing for me. Other graduates, like this one, wanted to engage in the public sphere in order to learn about the community and make new acquaintances. Still, others volunteered because the opportunity to give back aligned with a career-based interest. By volunteering, they could gain professional experience, which in the end could advance their careers. As one graduate, now working in retail management, explained: My life revolves around work and how I can get where I want to go so when I'm not working I do a lot of volunteer work. I work with Goodwill and another group that helps disadvantaged and do things that are related to putting on fashion shows so it overlaps with my work life. It's not coincidental since fashion is my passion. So I fill my time up with things I truly love to do so I feel fulfilled and I'm giving back, I guess you could say. As a whole, we concluded that most graduates were not necessarily apathetic or averse to participation in civic action and community engagement. Rather, many were consumed with trying to remain gainfully employed without neglecting their personal responsibilities. In most cases, if graduates they volunteered it often overlapped with their need to be more employable. We end this part of the report with an analysis of the three major learning needs today’s graduates had across the three arenas in their lives. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 19 4. Major Learning Needs: Personal Life, the Workplace, and Local Community So far, we have investigated the continued learning needs today’s graduates had in the arenas of personal life, the workplace, and the community. But how did these identified learning needs spill over from one arena into another? In this final analysis, we provide a bird’s eye view of our survey data and graduates’ top three learning needs. The results are presented in Figure 6 and Figure 7.24 Percentages based on a breakdown of the top three needs, given total n = 21,838 “check all that apply” responses, across all three arenas. Percentages may not add to 100% due to rounding. More respondents in our sample had wanted to improve their interpersonal skills and access resources on professional development and how-to information in the past year. While it makes intuitive sense that graduates would need interpersonal skills and how-to information to use in their personal and professional lives, the need for professional development puzzled us at first. We found, however, that the need for professional development in graduates’ lives could—and often did—spill over into different arenas, according to the graduates we interviewed. For instance, some graduates explained that they wanted to pick up coding or Web design to expand their career options and professional development. At the same time though, these same skills applied to their favorite hobbies or, to a lesser extent, their volunteer activities. 24 We calculated the results in Figure 6 and Figure 7 by dividing the total number of “checks” respondents assigned each of the learning categories (numerator) divided by the total number of checks assigned across all three arenas (denominator). In the figures presented earlier in this section, i.e., Figures 2, 4, and 5, we calculated the number of checks respondents assigned to a learning need (numerator) divided by the total number of checks for each learning need within each separate arena (denominator), i.e., personal life, workplace, and local community. Figure 7: Top Three Learning Needs Personal Life Workplace Community Total Responses #1: Interpersonal communication 727 925 267 1919 38% 48% 14% 100% #2: Professional development 487 1140 138 1765 28% 65% 8% 100% #3: How-to information 1243 337 155 1735 72% 19% 9% 100% 38% 48% 14% Personal Life Workplace Community 72% 19% 9% 28% 65% 8% Interpersonal Communication Professional Development How-to Information Figure 6: Top Learning Needs across All Three Arenas Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 20 Another telling trend from this analysis pertained to interpersonal communication skills. While graduates seek information to expand their careers and do things at home like cook and make repairs, they claimed that they were most in need of help with their one-on-one communication skills. In other words, the graduates we studied wanted to know how to interact with greater ease and effectiveness not only in the workplace, but also in everyday situations. As noted, this result was unexpected. To understand this need, we conclude this section with a closer look at this shortcoming in young graduates’ interpersonal communication skills. Follow-up Analysis: A Failure to Communicate? More respondents reported that they needed to improve their interpersonal skills than any of the 15 other learning needs listed in our survey. In this follow-up analysis, we explore what skills graduates said they needed and why. Based on our interviews, we identified three interpersonal communication skills graduates needed: (1) cross-generational communication, (2) informal discourse, and (3) assertiveness. Graduates we interviewed described struggling most to communicate in ways they had not necessarily encountered or experienced during college. For instance, many graduates said it was difficult to delegate tasks to people who were older, from different cultures, or sometimes both. Some said they had trouble with negotiating in the workplace for better assignments, salary increases, or backing from higher-ups. One graduate, now working at a Fortune 500 company, explained: We're coming from the college environment where we were interacting with peers that were about three to six years older or younger than your own age. And then you go into the workplace and my first job was in manufacturing and the population was entirely different, everyone was so much older than me—I was working with people my parents’ age! I know how to deal with my parents, but I didn't know how to deal with all kinds of different people that are my parents' ages. It's hard working across different generations. It's just not a small adjustment—that is learning from people I was technically hired to supervise and then needing to learn alongside fellow managers. Others said they spent lots of time and effort trying to read between the lines of email messages, especially from higher-ups at work. This finding suggested some graduates needed not only to improve their own ability to craft messages but also to understand the meaning of the messages that they received from their co-workers. Still others said they were uncertain about how to say “no” in their professional and personal lives without repercussions: I find I have a hard time saying “no” to people. So how, in a professional setting, do you say “no” while still being polite and helpful? Sometimes I will be on Google, thinking, “Oh no, how do I handle this situation?” But more often than not, the resources I find through search engines are more lifestyle things like how to deal with that difficult best friend vs. ones that are geared toward business and professionalism. The advice you find online can be so sterile and cold. It's more beneficial to talk to somebody and have that question and answer format, because while there are some similarities, every situation is different. …graduates said it was difficult to delegate tasks to people who were older, from different cultures, or sometimes both. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 21 At the same time, others talked about needing to improve their ability to “make small talk.” They said they faced challenges when establishing rapport and a common ground with co-workers, neighbors, and friends. Still others discussed the importance of knowing how to engage in informal conversation so they could develop connections in the workplace. As one interviewee, a graduate with a business degree, explained: I found out early on as someone who was young and very new to the office that speaking with CEOs and higher-ups was very intimidating to me. So I went to my boss and said, “I can't talk to this guy. When the CEO just comes into the break room to grab coffee, I can't talk to him.” My boss said, “Okay, we're going to work on this.” My boss helped me figure out what is appropriate for me to talk to him about. My boss told me that a lot of CEOs get asked questions about themselves, and sometimes they just want to hear how their business is going for you. You're part of the team. You're their asset. Taken together, not all of the recent graduates interviewed felt totally inept at communication. Rather, many wanted to develop verbal, non-verbal, and technology-enabled communication skills that were more sophisticated than what had worked for them during college. Whatever their circumstances, nearly all of the graduates we interviewed realized that polishing their communication skills would be a lifetime undertaking. Despite the ubiquity of technology in their lives and the hours spent online, graduates had often found the best solutions to communication problems through face-to-face chats with trusted allies. In this way, the graduates we studied were not very different from the many generations of college graduates before them. ! Part Two: Sources for Lifelong Learning What information sources do today’s graduates rely on for meeting their continued learning needs? We posed this question at a time when Wikipedia, YouTube, Facebook, and Twitter have dramatically changed the information landscape of the 21st century. Together, with Google searches, these 2.0 sites have carried a whole generation along, surging forward like a tsunami; re-sculpting our conceptions of human interaction, knowing, and sharing. With the Web, information abundance has replaced information scarcity. Every second, users post 6,000 tweets to Twitter25 and Google processes more than 40,000 searches.26 Users upload 300 hours of video to YouTube every minute.27 On average, Wikipedia posts an average of 800 new articles a day. 28 Some researchers have questioned the ability of the human mind to cope with the digital age’s deluge of data. 29 Still others have found Internet users cannot mentally process the amount, nature, and immediacy of information the Web serves up. For instance, a 2014 report released by Pew Research 25 “Twitter Usage Statistics,” Internet Live Statistics, accessed September 30, 2015, http://www.internetlivestats.com/twitter-statistics/. 26 “Google Usage Statistics, Internet Live Statistics, accessed December 27, 2015, http://www.internetlivestats.com/google-searchstatistics/ 27 Mark R. Robertson, “300+ Hours of Video Uploaded to YouTube Every Minute,” Reelse Blog, November 21 2014, http://www.reelseo.com/youtube-300-hours/. 28 “Wikipedia: Statistics,” Wikipedia, accessed November 30, 2015, https://en.wikipedia.org/wiki/Wikipedia:Statistics. 29 Daniel J. Levitin, The Organized Mind (New York: Dutton Penguin Random House, 2014). Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 22 found most respondents were grateful to have a way to share ideas with others (72%), believing the Web has improved their ability to learn new things (87%).30 Drawing on studies like these, we asked a sample of recent college graduates which information sources they used to fulfill basic to complex learning needs in their personal lives, workplaces, and the communities where they lived. Our objective was to examine the relationship between information seeking sources graduates employed and the learning needs they hoped to satisfy. Such findings can assist educators, librarians, employers, and producers of online learning tools in preparing students to be lifelong learners. We have divided this part of the report into three sections about the continued learning sources graduates used in their personal lives, workplace, and local communities. We conclude with a fourth section on the major learning sources across all three of these arenas. 1. Learning Sources: Personal Life We began with an analysis of continued learning sources graduates turned to in everyday life during the past 12 months. We collected survey data about graduates’ use of 28 sources. These sources fall into three categories: (1) traditional information systems such as libraries, museums, and bookstores that offer physical and virtual access to resources; (2) Web 2.0 forms and social networking sites (i.e., MOOCS and blogs); and (3) human-mediated channels (i.e., friends, family members, coworkers, and their bosses). In Figure 8, we present the findings from the survey. 30 Kristen Purcell and Lee Rainie, “Americans Feel Better Informed, Thanks to the Internet,” (Washington, D.C.: Pew Research Center, December 8, 2014), http://www.pewinternet.org/files/2014/12/PI\_InformedWeb\_120814\_02.pdf. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 23 Percentages based on total n = 1,651 recent graduates from 10 US colleges and universities and “check all apply” responses. A complete data set of responses to this question appears in Figure 8A in Appendix E. 88% 79% 79% 77% 72% 70% 67% 56% 52% 45% 44% 39% 37% 37% 24% 24% 20% 20% 19% 19% 19% 14% 14% 13% 13% 9% 9% 6% 0% 25% 50% 75% 100% Search engines, e.g., Google, Bing Friends Social networking, e.g., Facebook, Twitter Family News, e.g., print, online Books, e.g., paperbacks, e-books, etc. Educational sites, e.g., YouTube videos Blogs, e.g., from Huffington Post bloggers Online forums, e.g., computer help Public libraries, i.e., physical place, online Bookstores, i.e., physical place, online Coworkers Museums, i.e., physical place, online Licensed professionals, e.g., attorneys Online courses, e.g., Coursera Campus alumni associations Academic libraries, i.e., physical place, online Experts in a given field, e.g., budget analysts Former instructors/professors Library databases, e.g., ProQuest Supervisor/boss Community experts, e.g., clergy, coaches Current instructors/professors Professional conferences Open access databases, e.g., ERIC Career advisors Librarians Workplace information centers Figure 8: Learning Sources for Use in Personal Life Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 24 Summarizing the findings about the learning sources used in graduates’ personal lives: 1. Nearly all of the respondents (88%) had used search engines during the past year when they were specifically looking for learning materials they could apply to their daily lives. 31 In our follow-up interviews, graduates called Google their “go-to starting point” or “best friend.” Many said they used Google for finding quick-fix solutions, creative hobby ideas, consumer information, or housing options. 2. Over three-fourths of the sample relied on friends (79%) or family (77%) for guidance during the past year, suggesting that most graduates still see human connections as being very important for learning. Many of the graduates we interviewed trusted allies when dealing with money matters, such as improving a credit score, setting up a personal budget, or making a decision about an expensive purchase. 3. Almost four-fifths (79%) had used social networking sites like Facebook or Twitter in their personal lives as a learning source. Some graduates said they used Facebook for fun and social reasons and to learn from friends’ posts. Others deployed the “like” feature as an aggregator tool, enabling them to receive new posts from traditional news magazines, such as Business Week or Newsweek. Still others tapped into social network sites to extend their social circle and arrange for local meetups. 4. Over two-thirds of the sample (72%) followed news sources as a way to stay up-to-date and current. Most said they read a mix of traditional media from national sources, such as The New York Times, Huffington Post, or Newsweek, through links found on blog postings, tweets, or Facebook feeds. 5. Seven out of 10 (70%) read books to fill their lifelong learning needs in the last year. Many said they had no preference for formats and used hardbound books, e-books, or paperbacks—whatever happened to be available, costeffective, and close at hand. 6. Over two-thirds of the respondents (67%) turned to educational websites over the past 12 months. Most mentioned watching short videos on YouTube to pick up how-to information or to figure out how to use new apps on their mobile devices. Others watched TED Talks so they could hear about new ideas in science, business, or medical fields. 7. Over half of the sample (56%) reported they followed blogs. According to the blog users we interviewed, they read posts and users’ comments about topics they needed in their personal lives, such as managing money, raising babies, buying a house, improving interpersonal communication skills, or finding step-by-step instructions for hobbies, such as cooking. 8. More than half of the sample (52%) had turned to online forums, such as Stack Overflow, when troubleshooting computer problems. Others used forums for finding quick fix solutions, like figuring out how to set up a newly purchased electronic gadget, such as a new digital watch or monitor, used forums offered through sites like CNet, according to the interviewees. 31 More than one in 10 respondents (12%) did not report that they had not used search engines during the past year for continued learning in their personal lives. We acknowledge that these respondents may have used search engines for supporting other tasks, but did not use search engines to support the continued learning needs they may, or may not, have had. The same logic applies for explaining respondents’ use of other sources in this analysis, as well as the analyses about the workplace and local community. Most mentioned watching short videos on YouTube to pick up how-to information... Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 25 9. During the past year, more than two-fifths (45%) reported using a public library—in-person and/or online. Graduates we interviewed said they had scanned shelves at their local library for books on home repair, hobbies, landscaping, cooking, or travel. Others said they went online to place best sellers on reserve that they could pick up at their local library later on. These findings suggest that many graduates preferred borrowing to buying. Slightly fewer had used bookstores (44%) and museums (37%) to browse titles or see exhibits. 10. Over one-third of the graduates trusted their coworkers (39%), and to a lesser extent their supervisors (19%), as sources of advice and guidance they could use in their personal lives. In follow-up interviews, graduates said small talk with coworkers kept them current about local events, books and movie recommendations, relationship issues, or housing options. 11. Some respondents sought expert advice from licensed professionals or experts during the past year, such as attorneys (37%), budget managers (20%), or career advisors (9%). 12. Almost one-quarter of the sample reported staying connected through their campus alumni association (24%). According to graduates we interviewed, many used alumni websites to find out about networking events, job leads, continuing education, or volunteering opportunities. Others said they checked the alumni website to keep up with old classmates or purchase tickets to campus events, like college football games. 13. Almost one-fourth (24%) had enrolled in an online course during the past year, with some saying they had enrolled in a MOOC, such as Coursera, so they could improve their computer skills with coding, programming, or Web design, according to interviewees. 14. One-fifth of the respondents (20%) consulted academic libraries and slightly fewer (19%) accessed online articles from library databases, if they had access, such as ProQuest or JSTOR, during the past 12 months. These visits were both physical and virtual, according to the graduates we interviewed. Some said they used scholarly sources through their campus library when they needed to conduct more intensive research on a topic, such as scientific breakthroughs for treating diseases like cancer. 15. Some respondents had contacted their former instructors (19%), or current instructors (14%) in graduate programs in which they were enrolled or had completed, for guidance.32 Others had consulted a community expert, such as clergy or a coach (14%) or a librarian (9%) during the past year. Not surprisingly, most graduates said they used a mix of Google searches and popular sites like Facebook, Pinterest, or YouTube to locate quick-fix solutions or creative ideas. But their online searching did not end there. Many graduates that we interviewed had consulted books, blogs, NPR, or BBC broadcasts to learn more deeply and authoritatively about new ideas. Others tuned into documentaries or TED Talks on YouTube since it felt like being back in school again—but with shorter lectures that were “impactful, concise, and applicable.” Still others said they took deep dives into the plethora of sources available on the Web, especially when a topic piqued their interest. 32 One in five (20%) of the survey respondents were currently enrolled in a graduate program and 28% had already completed a graduate program. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 26 Still others let their curiosity lead them from one source to the next over days and weeks in what one graduate called “serendipitous learning”: It all started because I watched a documentary, The Business of Being Born—it’s what sparked my interest in midwives and exploring those options. So, after I saw that documentary, I looked at some other documentaries, and I went online to research statistics, what were options in my area, where to go, and what my options were with my insurance for having my own baby. There were books that were mentioned in the documentaries and that came up when I was searching online. I bought Ina May Gaskin's book on childbirth. I would also look at YouTube videos about natural childbirth. Nearly all of the graduates we interviewed complemented their use of online sources with face-to-face discussions. Such conversations were useful for finding out about local events or restaurants, or when graduates were making risk-associated decisions, such as switching jobs, making a major purchase, starting a family, or figuring about money matters, according to interviewees. All in all, most graduates we studied realized the Web could not satisfy their continued learning needs. Conversations with friends and family mattered. So did the traditional learning sources they had relied on in college—books and libraries. To comprehend how recent graduates continue to learn in their personal lives, we conducted two follow-up analyses: 1) a discussion and findings about graduates’ use of blogs, and 2) their use of public libraries. Follow-up Analysis: Why Do Blogs Still Matter? Short-form content—as quickly created as it is consumed—has captured the attention of a nation of Internet users. In 2015, Instagram, Snapchat, and Twitter made the list of the top 25 most frequently downloaded mobile apps in the US.33 When we conducted interviews with recent college graduates in our study, we found that blogs, an older Web form, still mattered, too. In this follow-up analysis, we discuss some of the reasons graduates rely on blogs for continued learning. According to our survey results, more than half (56%) had turned to blogs in the past year. More than two-fifths of the respondents (43%) had followed between one and four blogs to meet their continued learning needs. The majority of these blog followers were women (68%), slightly lower than the national average for social media usage.34 As content that once was the bedrock of the blogosphere has migrated to sites like Tumblr, Twitter, or Facebook, 35 we found the recent graduates we studied still turned to blogs for a variety of reasons (Figure 9). 33 Dan Frommer, “These Are the 25 Most Popular Mobile Apps in America,” Quartz, August 18, 2015, http://qz.com/481245/these-are-the- 25-most-popular-2015-mobile-apps-in-america/. 34 Megan Garber, “The Digital (Gender) Divide: Women Are More Likely than Men to Have a Blog (and a Facebook Profile),” The Atlantic, April 27, 2012, http://www.theatlantic.com/technology/archive/2012/04/the-digital-gender-divide-women-are-more-likely-than-men-to-havea-blog-and-a-facebook-profile/256466/. 35 Verne Kopytoff, “Blogs Wane as Youth Drift to Sites like Twitter,” The New York Times, February 20, 2011, http://www.nytimes.com/2011/02/21/technology/internet/21blog.html; Jason Kottke, “The Blog is Dead, Long Live the Blog,” Nieman Journalism Lab, December 19, 2013, http://www.niemanlab.org/2013/12/the-blog-is-dead/; Felix Gilette, “Department of Blogging Extinction: Technorati Rankings are Dead,” Bloomberg Business, June 24, 2014, http://www.bloomberg.com/bw/articles/2014-06-24/department-ofblogging-extinction-technorati-rankings-are-dead. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 27 Percentages based on total n = 1,651 recent graduates from 10 US colleges and universities. Responses of “strongly agree” and “somewhat agree” have been conflated into “agree.” Summarizing findings about the reasons for blog use: Summarizing findings about blog use: 1. More than anything else, blogs were an affordable source (71%) of the know-how that recent graduates needed. According to the survey results, blogs offered up-to-date information (69%) and good summaries of topics (61%) from insiders, according to our survey results. Many blog users we interviewed said they would not have been able to afford to hire this quality of expertise so they relied on blogs for guidance, instruction, and advice. 2. Further, six in 10 (60%) reported that blogs were easy to locate using search engines. To a slightly lesser extent, there was an authenticity and candor to blog content (59%); writers rarely are compensated, unlike the writers from the mainstream media—publications that graduates we interviewed said they tended to mistrust. Notably, none of the interviewees mentioned sponsored reviews, which are a form of advertising on some blogs. 3. Over half the graduates said they prioritized their search for blogs by looking for utility as well as for ongoing discussions with multiple voices (55%) about the kinds of things today’s they need to know. According to graduates we interviewed, blogs helped with learning more about things such as personal budgets, house-buying, parenting and newborn baby care, workplace communication, or starting a business from the ground up. In other cases, some said blogs helped them keep up on neighborhood news: Blogs can get very specific about your neighborhood and they can cover just one neighborhood that newspapers really don't and can't. People who write for these blogs writers are on the ground and they're involved in the community. Blogs like this are very up to date. Several posts come out a day. If something happens, they're on it immediately. 71% 69% 61% 60% 59% 55% 0% 25% 50% 75% 100% Provides a good source of low-cost information Is a good source of current information Gives good summary of a topic Is easy to find with search engines Offers more candid viewpoints than mainstream press Allows for ongoing discussions with posts Figure 9: Why Graduates Read Blogs Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 28 Utility, highlighted earlier in our report as being an important information quality to young graduates, was a main reason why graduates surveyed relied on blogs.36 Blog users we interviewed said they were looking for “specifics” and “how-to information” they could directly apply in their lives. They wanted practical and no-cost information that they could call up quickly and use. We found most graduates said they were selective about the blogs that they consult, especially when they wanted to follow a certain topic closely. Many said they followed blogs after having carefully vetted them in a variety of ways. For instance, one interviewee who had double-majored in business and music said he started reading a digital marketing guru’s blog after first learning about him in a New York Times business article. Another interviewee, who was setting up a graphic design business, said she is following a well-known entrepreneur’s blog for ideas and guidance. Still another young graduate, who had majored in finance, said she had done a Google search and culled the results to find a credible blog about setting up first-time personal budgets after college. The comments posted on blogs, she said, helped her figure out which solutions worked over time and, ultimately, whether or not the budgeting methods were feasible for her. Today, there are a myriad of online sources with this kind of shared utility for lifelong learning, such as online forums, social network sites, and video-sharing sites. However, our findings suggest these online venues may simply not be enough to provide lifelong learners with the quality of information graduates seek. The quality and depth of blogs that have not migrated to social media platforms may be filling a gap with more information-rich content and less of the self-absorbed opinion and personal musings of the past. In the next section, we provide results from another follow-up analysis, this time, about public library usage. Follow-up Analysis: Public Libraries, along with What Else? Almost half of the graduates we surveyed (45%) had used a public library during the past year. In this follow-up analysis, we asked those respondents who reported using public libraries for continued learning, what other information sources were they likely to use for the same purpose. A logistic regression analysis was used to determine the circumstances in which public libraries were more likely to be used—and not used—in graduates’ personal lives.37 The results of the analysis that are presented in Figure 10 provide the probability of whether respondents who used public libraries also used other sources for lifelong learning during the past 12 months. The full model containing all nine predictors of public library usage correctly classified 73% of the cases (n=1,571).38 36 Some of this discussion appears in Alison J. Head, “Why Blogs Still Matter to the Young,” (Cambridge, MA: Berkman Center for Internet and Society, Harvard University, December 2014), http://projectinfolit.org/images/pdfs/Why\_Blogs\_Matter.pdf. 37 The model contained nine independent variables: (1) consulting with a librarian(s), (2) visiting bookstores, (3) museums, (4) use of educational websites, (5) open access scholarly databases, e.g., ERIC, (6) gender, (7) having the ability to learn anything on their own, (8) use of online courses, and (9) age. The model’s dependent variable was the use of public libraries in their personal lives. We determined use by graduates’ responses to survey questions about the reported use of public libraries. 38 The value of the Nagelkerke R-squared was 0.3265, which means that 33% of all of the variance in the use of public libraries in personal life can be accounted for by these variables, using this model. Project Information Literacy Research Report: “Staying Smart” | January 5, 2016 | Alison J. Head 29 As shown in Figure 10, although their effect was small, seven of the nine independent variables made a statistically significant contribution to the model about public library usage (0.05%) level. In the figure, these variables appear asterisked in the first column of the figure and shaded in gray. The associated p-values of the standardized partial regression coefficient and the odds ratio are bolded. Figure 10: Logistic Regression Analysis Results on Public Library Usage Estimate of B S.E. of B p-value of B Odds ratio 95.0% C.I. for Odds ratio Probability Lower Upper Intercept -2.048 0.327 0 0.129 Librarians\* 1.704 0.259 0 5.497\* 3.31 9.13 84.609% Bookstores\* 1.051 0.125 0 2.859\* 2.237 3.655 74.089% Museums\* 0.973 0.126 0 2.645\* 2.066 3.387 72.567% Open access databases\* 0.733 0.189 0 2.081\* 1.438 3.012 74.089% Educational websites\* 0.697 0.137 0 2.007\* 1.535 2.623 66.741% Gender\* 0.442 0.126 0 1.555\* 1.216 1.99 60.868% Having the ability to learn anything on my own \* -0.33 0.162 0.042 0.719\* 0.523 0.988 41.822% Online courses 0.036 0.145 0.806 1.036 0.78 1.377 50.892% Age 0.01 0.009 0.288 1.01 0.992 1,028 50.243% Percentages based on total n = 1,571 recent graduates from 10 US colleges and universities. Bolded values with asterisks (\*) are statistically significant at p