

Information Literacy: 21st Century Library Research Methods for African Studies

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1. What is information literacy and why is it important for African studies?

Today's information environment for African studies, as in other areas, is vastly different from what it was in the last century. The central problem for library researchers in African studies decades ago hinged on awareness of a relatively few specialist, published reference and other print bibliographic tools for discovering relevant materials (Frank-Wilson 2004: 106; see McIlwaine 2007a). Many more resources are available now from African and other sources, but they present a complex terrain to navigate for many reasons, both old and new (see Limb 2007). The field has become more interdisciplinary in terms of data sources and subject matter, making bibliographic searches in any single topical, geographical, or discipline-based source (or even in the most comprehensive index databases) less likely to fulfil all of one's scholarly needs. While scholarly sources of documentation are freely available online, these may be fragmentary, idiosyncratic or incomplete as citations are made available passively and without context through services such as Google Scholar.¹ Students may encounter library resources online without having developed the critical evaluation skills and contextual judgement that more experienced scholars may take for granted (Hargittai *et al.* 2010), and which may be essential to employ during library research to identify and engage effectively with African scholarly perspectives.

This essay calls for African studies academic programmes to educate students in information literacy, or library research methods, so that they become more capable of navigating the rich but difficult and increasingly complex information environment of the 21st century. My background and attention is on the North American university environment, so my arguments and conclusions are informed primarily by this perspective. While I have attempted to incorporate African, European and other world perspectives in

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¹ Libraries can link subscription-based scholarly database and full text resources to Google Scholar, providing access to their electronic holdings for all library users who log in to their university accounts. At Northwestern University, 'library administrators found a 78 per cent increase in requests for articles coming from Google Scholar users' (Google 2007). Transparency and seamlessness, two advantages of this approach, are also problems: users remain unaware that they are accessing subscription sources paid for by their institutional libraries (Herrera 2011: 329).

this work, much of the literature on the information-seeking behaviour of library researchers focuses on undergraduate students in the United States. Much of my own work is with postgraduate and faculty researchers, but a relatively small portion of published sources focus on these more advanced groups (whose members by all indications demonstrate quite different research behaviour by discipline and other factors). My interpretation of the overall literature is that additional training in library research methods is needed to improve library research skills at every level and that such training should be offered in as many different formats, locations and settings as we can offer in order to find ways to engage library researchers in the times and places that they need assistance. For some students, formal credit-bearing coursework may be appropriate. One such group, I argue, is graduate students in African studies, many of whom face particular challenges in pursuing library research within their fields.

Information literacy, formulated conceptually in the US in about 1990, is the ability to engage a strategic approach in discovering appropriate, available sources of information given a researcher's needs and resources, allowing the researcher to adapt and employ research skills effectively and efficiently in a complex and changing information environment to evaluate, use, communicate and manage findings (see Badke 2008: 2–4, 7; Gibson 2008: 16–18; see also CILIP 2011). The Association of College and Research Libraries' (ACRL) review of best practices for teaching information literacy recommends the integration of disciplinary content with information literacy concepts that 'results in a fusion of information literacy concepts and disciplinary content' (ACRL 2006; see Johnson, Arendall, Shocret *et al.* 2010: 53–4). University students are generally far less information-literate than they imagine or report, so they remain limited in their ability to conduct scholarly research. This is no less true for students in African studies than it is for university students more generally.

Unless universities cultivate improved information literacy among current students, students in turn will not be as effective at gathering and analysing or interpreting useful information as they might be in their university work and later, during their professional careers. Beyond the academy, professionals may suffer even more if they lack a strategic approach that prevents them from developing or incorporating new search skills into their work-related library research as technologies change throughout their working lives. Shortcomings in information literacy may impede practitioners from the discovery and implementation of proven, published solutions to the problems they are charged to mitigate and resolve. This was the case in one recent study of Tanzanian livestock veterinarians, who had access to a range of useful electronic resources of which few were aware, although those who had been trained in information literacy did employ a range of effective searching skills (Angello 2010: 13–16).²

² See Table 5 listing in order of general awareness the following resources, available without cost (or at a small institutional charge) to practitioners in the developing world: AGORA (Access to Global Online Research in Agriculture, a FAO project, see: <www.aginternetwork.org>); HINARI (a WHO project sponsoring access to 1,500 health related journals from major publishers, see <www.who.int/hinari>); Medline, see <www.nlm.nih.gov>; Inform (the International Network for Online Resources and Materials, see: <inform-network.org>); Cochrane Library (an NGO with official ties to WHO, see <www.cochrane.org>; Ingenta, see <www.ingentaconnect.com>; OARE, a public-private partnership sponsored by the United Nations Environment Programme and Yale University, see: <www.oaresciences.org>; Tanzania Development gateway, see: <www.tanzaniagateway.org>;

A similar case was reported for a group of Kenyan medical professionals (Kamau and Ouma 2005: 6). These examples are frustrating from an Africanist librarian's perspective because they illustrate how insufficient levels of information literacy effectively prevent access to appropriate scholarly information resources, despite great effort and progress in improving the availability of such resources to researchers and practitioners in developing areas (see Murray 2009).³

One of the most rewarding aspects of my work as an African studies librarian is teaching students how to overcome the difficulties of working with African and other scholarly resources to more effectively and strategically engage in library research relating to Africa. While instruction plays a role in many of my encounters with library researchers, including email message exchanges, classroom orientations and one-to-one consultations in my office, the most thorough and effective way to develop students' information literacy for African studies library research has been with the graduate credit course that I have taught for over ten years. In this essay, I describe what we know of library research and information-seeking behaviours of students (much of it thanks to the incorporation of ethnographic methods into studies of how students perceive and use information resources to conduct their research), consider the diversity of their skills levels and argue that there is an overall need for more (and more formal) training in library research methods. It is helpful to understand how students are pursuing library research prior to introducing more effective research strategies to them. While useful workaround solutions to introduce improved student training in library research have been developed and pursued by creative instructional librarians, I make the case for what I consider the most effective long-term solution for African studies and other graduate students: offering for-credit information literacy courses designed specifically for their disciplinary needs. Finally, I summarize the contents of my course, emphasizing the conceptual, strategic approach that I have found to work best to dramatically improve the level of students' information literacy.

2. Student information-seeking behaviour within and outside libraries

There is some truth to the stereotypical image of the technologically skilled university student. Having grown up in a world of seemingly ubiquitous electronic game devices, networked computers, wireless communications, sophisticated gadgets and instantaneous online access to troves of information, many university students seem utterly at ease with everything digital, internet, wireless, and mobile; they appear to be naturally gifted experts at rapid information access from anywhere. While such students certainly exist, they are not as representative of their university peers as some may imagine. As an academic librarian at a large university, I meet many students who are embarrassed by their lack of skills in electronic information searching, unfamiliarity with library research and inability (or unwillingness) to be in constant mobile contact. They know what is expected of them and understand that they do not fit this oversimplified image. The majority of students may

Tanzania Online, see: <www.tzonline.org>; Health and Wellness Resource Centre, see: <www.gale.cengage.com/Health/HealthRC/about.htm>; and Africa Journals Online, see: <www.ajol.info>.

³ See also Harris (n.d.) for an example of one exceptional volunteer effort to educate health care practitioners in Africa.

never request help when confronted by a library research project, despite the availability of reference librarians who are eager to assist (or refer them to disciplinary specialists) through a wide variety of convenient communication channels.

Academic librarians may be prone to believe that ‘digital natives’ (Prensky 2001a, 2001b), ‘Millennials’ (Howe and Strauss 2000, 2007), or ‘net generation’ students (Tapscott 1998, 1999) enter university with well developed online search skills, demanding new services (Gardner and Eng 2005; Gibbons 2007). This generalized impression may be due to selection bias among those students who are most vocal and willing to approach librarians and public service or reference desks, whereas one study reported that up to 85 per cent of students were anxious about library research assignments, embarrassed at their lack of familiarity and unwilling to reveal their ignorance by requesting help from librarians (Mellon 1986: 162; see Fister 2002; Vondracek 2007; Bridges 2008; Asher and Duke 2011). A good deal of research demonstrates that university students are a diverse group in terms of skills levels, use (or, as these authors demonstrate, avoidance) of library resources and buildings and expectations. These characteristics reflect economic, gender, cultural or racial, educational, and disciplinary backgrounds (Whitmire 1999, 2001, 2002, 2003; Bridges 2008; Hargittai 2010). There is no need for educators to revolutionize reliable educational methods or for librarians to reshape basic library services simply because of the changing backgrounds of some of our most visible students. Their ‘everyday technology practices may not be directly applicable to academic tasks’ (Bennett *et al.* 2008: 781). Even those students already comfortable with digital technologies as day-to-day tools outside of academia need to learn some of the specific approaches and search techniques (for both print and digital resources) required for effective scholarly research (Barry 1997; Kai-Wah Chu *et al.* 2007, 2008). Among these are skills in independently evaluating the credibility and appropriateness of sources discovered online, rather than naively trusting search engine rankings, commercial relevance-sorting algorithms and paid placement deals between advertisers and search engine providers. ‘How users get to a Web site is often as much a part of their evaluation of the destination site as any particular features of the pages they visit’ (Hargittai *et al.* 2010: 486; see Flanagan and Metzger 2007).

Scholarly and general information environments are large and complex; libraries themselves present their own organizational and navigational challenges (both physically and online). Rapid technology change limits the long-term value of specific search skills and challenges all of us who work in this changing information environment to constantly build new awareness and upgrade our skills. Based on empirical research employing ethnographic methods at several US Midwestern universities, Andrew Asher, lead research anthropologist at the Ethnographic Research in Illinois Academic Libraries (ERIAL) Project, recently summarized this situation with regard to university students:

“Students do not have adequate information literacy skills when they come to college . . . even high-achieving students . . . they’re not getting adequate training as they’re going through the curriculum. Student overuse of simple search leads to problems of having too much information or not enough

information . . . both stemming from a lack of sufficient conceptual understanding of how information is organized,” he said. Those libraries that have tried to teach good search principles have failed, he continued, because they have spent “too much time trying to teach tools and not enough time trying to teach concepts.” It would be more useful for librarians to focus training sessions on how to “critically think through how to construct a strategy for finding information about a topic that is unknown to you” (Kolowich 2010a).

All too frequently, students are looking in the wrong places, or in too few of the right places, when they engage in scholarly research. They do not necessarily understand how a library catalogue differs from journal index databases, or the differences among the tens of thousands of indexes and other specialist databases available through their university and library affiliation. They also may not be aware that logging into their online university accounts while researching online dramatically enhances even publicly available resources with such benefits as full text access (see Google 2007). Some may be effective working in one database, or in a few search interfaces (each incorporating many databases), but may not be aware of how best to modify their research techniques in other settings. Even among graduate students (who generally have developed better skills in using specific journal sets, bibliographic index databases and similar resources) a wide range of information resource awareness, research sophistication and technical search skills is evident in reviewing initial classroom exercises. Many library users (often using library and other information resources from outside the physical library building) need assistance to use these information systems effectively and efficiently to conduct scholarly research (Suchman 1987, 2007).

An important first step in knowing how best to support and assist academic researchers seeking scholarly information is to improve our understanding of their needs by learning how they conduct library research. Librarians have recognized the importance of understanding library communities as a means of improving services to their users for over a century (see Cutler 1896; Stingley 1919; Wheeler 1924). Our first inclination in seeking library user perspectives and input is often to ask them directly through surveys. While surveys may be a useful method for assessing what library users want or need, there are risks to relying on survey responses alone (see Bernard 2011; Miller and Salkind 2002). For example, sampling bias is difficult to avoid: including people who walk into the library may be a skewed representation of the overall population of library resource users, while online users may not be well represented by those who respond to an online survey. Validity is notoriously difficult to establish using survey methods (for example, respondents may report satisfaction because they are not aware of missing but useful resources). Furthermore, there are strong indications that students generally evaluate their own research skills as above average (see Twenge 2006; Twenge and Campbell 2009), when in fact they may most often rely on general online search tools, rather than specialist resources better suited for scholarly purposes.⁴ As one recent research team

⁴ Information providers are under pressure to emulate Google’s simple search interface. However, overreliance on Google does not serve scholarly purposes well (see Walsh 2004; Zell 2006a; Kolowich 2010b). Most students do not understand what information sources are – and are not – included in Google searches, the structure of the information available to the search engine, how search results are

put it: 'people do not necessarily do what they report on surveys' (Hargittai *et al.* 2010: 486).

There are many examples of well designed surveys⁵ that answer important questions and provide valuable insights for librarians, publishers and scholars as we evaluate the impacts and options in providing library services and work to improve access to and awareness of scholarly resources (see Whitmire 2002; Heath *et al.* 2004; Chrzastowski and Joseph 2006; Radford and Snelson 2008; Bridges 2008; Schonfeld and Housewright 2010). But employing a variety of social research methods in libraries provides complementary sources of evidence and other important benefits. Focusing observation directly on researcher and library user practices (rather than on attitudes, opinions and self-reported actions) provides an opportunity to gather data not available to surveys, which is especially important in building awareness of issues or problems not yet identified. By conducting behavioural research, we allow ourselves the opportunity to see library researchers in a new light and to be surprised by our findings. By paying attention to changes in library research behaviour, we can develop strategies to reach our clientele more effectively, teach the principles of information literacy and provide students with the tools they need to excel in a rapidly changing information environment.

One way to investigate library users' information seeking patterns more or less indirectly is to interview and observe how they interact with reference librarians, engage with library services and share with their colleagues the resources they have found (see Ellis 1989; O'Day and Jeffries 1993a, 1993b; Folster 1995; Nardi and O'Day 1996, 1999; Sadler and Given 2007). Citation patterns are indirect evidence that can be unobtrusively observed, as scholarship requires documenting consultation with the archive, allowing others to access data sources for independent analysis and interpretation. Citation pattern analysis allows convenient comparison over time and across disciplines as well as concrete evidence of the impact of a rapidly changing information environment on scholarly practices. These studies may suggest ways that libraries can target particular academic areas for improved services (see Broadus 1987; Wilberley and Jones 1989; Ellis *et al.* 1993; Watson-Boone 1994; Brown 1999; Hiller 2002; Hemminger, Dihui Lu, Vaughan *et al.* 2007; Evans 2008; Kayongo and Helm 2009; Smyth 2011).⁶

Applied anthropology is the employment outside of academia of research methods, theories and concepts from the discipline. It 'became a recognized discipline in the prewar colonial epoch' (Thompson 1976: 2).⁷ Applied anthropologists have played an important role in bringing behavioural research

ranked for relevancy and returned to the user, or how advanced searches can improve results (see Tenopir 2002).

⁵ Using a less common method, Daly (2011) employs a small sample, intensive interview technique to explore Duke University undergraduate honours programme participants' research strategies and processes.

⁶ See Webb, Campbell, Schwartz *et al.* (1966: 37) for a classic example of an unobtrusive measure: that of museum exhibit popularity based on tile wear. Evans (2008) is particularly interesting for the debate inspired by his controversial finding that, as the scholarly archive has been opened through convenient electronic access, social science citations have (counterintuitively) narrowed.

⁷ The earliest known use of the term 'applied anthropology' dates to an 1881 meeting of the Royal Anthropological Institute (Bodley 1999: 173). This was not a localized or idiosyncratic usage, as Daniel Brinton used the term in his 1895 speech on Paul Broca in Washington DC (Peattie 1958: 4). Edward Burnett Tylor (a founder of English social anthropology) called anthropology a 'policy science' and

methods to many fields and organizations. Anthropologists conducting research on campus and in libraries may bring media attention that plays on the irony that mundane, stereotypically formal⁸ institutions should interest ethnographers, associated more with work in far-off lands than among our own ‘digital natives’. In fact, anthropologists have worked in familiar organizations (see Agar 1980; van Maanen 1988) and on university campuses (see Moffatt 1989; Nathan 2005) for decades. None of this should be surprising: the origins of anthropology as a discipline lie in an engagement with the important social issues of the 19th century.⁹

The earliest examples of ethnographic methods employed in research relating to libraries grew from work on the role of information technology in organizations (see Orlikowski 1991; Orlikowski and Baroudi 1991). Authors in technical fields such as information systems design (Bentley, Rodden, Sawyer *et al.* 1992; Avison and Myers 1995; Harvey and Myers 1995; Harvey 1997; Hartmann *et al.* 2009), information retrieval (Ellis 1989) and human-machine interfaces (Suchman 1987, see also 2007 2nd edition; Nardi and O’Day 1996, 1999) have not generally been professional anthropologists, but have employed and advocated ethnographic methods to understand information-seeking patterns, closely related to library research behaviours. Among these authors, only Suchman and Nardi are professional anthropologists. Suchman worked for 20 years as a researcher at Xerox’s Palo Alto Research Center (PARC), developing information systems based on her ethnographic studies of work. Nardi, with research partner O’Day, a computer scientist with overlapping experience in research laboratories at Hewlett-Packard, Apple Computer and PARC, focuses on corporate reference librarians and services at these institutions (Nardi and O’Day 1996). Considered groundbreaking by many, this article is much appreciated by reference librarians themselves, who are identified as a ‘keystone species’ in the ‘information ecologies’ (*ibid.*: 81) of modern organizations (important in making technology work well for users). Both this study and Suchman (1987) emphasize the underappreciated importance of human, expert agents in mediating the engagement of people with technological resources, providing users with more resources than they know they need and playing a role that the authors suggest will never be effectively subsumed by the software agents that may nonetheless supplement them.

An extended observation of academic library services was conducted by Pedersen, Espinola, Huston *et al.* (1991), but in many ways Klopfer’s (2004)

James Hunt, co-founder of the Anthropological Society of London (which merged with rival groups to create the Royal Anthropological Institute), used the term ‘practical anthropology’ (Simonton 2010). Between 42 to 60 per cent of Ph.D. anthropologists and virtually all M.A. anthropologists work outside the academy at present (Guerrón-Montero 2008: 1; see Fiske 2008; Kedia and van Willigen 2005). The history and scope of applied anthropology is reviewed by Nolan (2003); Eddy and Partridge (1987); Fox (1991); Peattie (1958); Rylko-Bauer *et al.* (2006); Simonton (2010); van Willigen *et al.* (1989); and van Willigen (2002).

⁸ Modern libraries and universities trace their origins to medieval monastic practices, but there are classical survivals in these institutions as well, not the least of which are official complaints at their cost. In *De tranquillitate animi* (ix, 4–7) Seneca the Younger argues that ‘Such a mass of books just overwhelms the student and doesn’t teach him anything’ (Setton 1960: 373).

⁹ ‘The ethnological societies of London and Paris [founded in the early 19th century] were ... abolitionist organizations’ (Peattie 1958: 4); American lawyer and anthropologist Lewis Henry Morgan applied his research to defend Iroquois land rights against the Ogden Land Company in the 1840s (Morgan and White 1993: 2, 54; see also Armstrong 1978).

ethnography of popular sidewalk commercial libraries in India represents a closer antecedent to the approach of current work in considering the community context. While other 'interactive observations of users or librarians within particular libraries' (e.g., Pendleton and Chatman 1998) employ the term ethnographic, few consider how the community of users interacts with the information ecologies of the library: 'Like museums, libraries are complex institutions whose personnel and technologies mediate formal and informal practices of learning, entertainment and communication. . . . Library studies would benefit from broader ethnographic research that places libraries in communities and societies' (Klopfer 2004: 106). The author suggests Durrance (1995, 2001) is a better model for this broader view. More recent work, such as that of Dent (Dent and Yannotta 2005; Dent 2006; Dent-Goodman 2011), offers an ethnographic perspective of a Uganda community library and insight into applying ethnographic research methods in libraries (including historical precedents in community analysis). Several recent studies of African communities and their use of libraries have been recently reported as well (see Kwake *et al.* 2005; Chilimo *et al.* 2011; and Stilwell 2011), while participant observation methods were used to investigate faculty research behaviour (whose library research methods were generally characterized as 'trial and error') by ethnographers at several Swedish universities (Haglund and Olsson 2008: 55).

An emerging trend in the ethnographic study of libraries and library users appears to be largely associated with projects to design library services, redesign spaces, build new functional areas and establish information or learning commons (see Beagle 1999; Bisbrouck 2001; Bennett 2005). When building projects are planned, funds may become available to hire consultants, opening up possibilities for ethnographic research focusing on library users. An early example of such studies was conducted at The University of the South (O'Connor 2005), but greater attention has been focused on the 'Rochester Study' at the University of Rochester's River Campus libraries (see Foster and Gibbons 2007). In part this may be because the latter (directed by an anthropologist) appears to have inspired so many other efforts at employing a range of broadly ethnographic methods to understand student behaviour with relation to library resources and buildings (see Suarez 2007; Gabridge *et al.* 2008; Bryant 2007, 2009; Bryant *et al.* 2009; Delcore *et al.* 2009; Applegate 2009; Gilbert, Hulsberg, Monson *et al.* 2010; Duke and Asher 2011). These studies were undertaken at Brock University in Canada, the Massachusetts Institute of Technology, Loughborough University (UK), California State University at Fresno, Indiana University-Purdue University Indianapolis, Northwest Missouri State University and by the Ethnographic Research in Illinois Academic Libraries (ERIAL) Project, which includes DePaul University, Illinois Wesleyan University, Northeastern Illinois University, the University of Illinois at Chicago and the University of Illinois at Springfield. Given that these projects have all been reported in the last five years, the breadth of their geographical representation and the diversity of their institutional characteristics are remarkable and their findings richly deserve attention.

In a review of the Rochester study, Seadle (2007) calls the project a milestone, as about 30 per cent of the library's professional staff were involved in the research (see Foster and Gibbons 2007: 55), but also because of the innovative use of a diverse set of methods that included giving cameras to

students, asking them to take photographs and draw maps to help the librarians understand their social constructs of the library landscape (*ibid.*: 48). The Rochester study has attracted specialist journalistic coverage in *The Chronicle of Higher Education* and *Library Journal* (see Carlson 2007; Marshall *et al.* 2007), producing, for example, ‘one of the most popular articles *The Chronicle* has run in recent years’ (Carlson 2009).¹⁰ A number of conference sessions, workshops, blog entries and the like have followed, concentrating to a large extent on undergraduate study, work, or research practices (see Bishop 2010; CARLI 2010). Also announced for publication this autumn is the edited volume on the ERIAL project entitled *College Libraries and Student Culture* (Duke and Asher 2011).¹¹

3. Student library research and the need for better information literacy

What do we currently know about student library research behaviour? Even good students at prestigious institutions (such as MIT) lack sufficient awareness of the scholarly research tools that academic libraries provide and the skills to use them effectively (Gabridge *et al.* 2008: 521–2). They overuse general resources and underuse scholarly tools such as the library catalogue and journal index databases. While ‘the typical student in [the Rochester study] was familiar with databases other than Google’ (Foster and Gibbons 2007: 8; see Herrera 2011: 323), they may still underuse scholarly resources in favour of familiar, everyday search engines. Students may evaluate websites based on the perceived professionalism of page design, or on official-appearing names and logos (Asher and Duke 2011). They like the extreme simplicity of Google’s screen design (Seadle 2007: 617) and naïvely trust this popular search engine brand to place the best and most appropriate results on top:

To complete many of the assigned tasks, students often turned to a particular search engine as their first step. When using a search engine, many students clicked on the first search result. Over a quarter of respondents mentioned that they chose a Web site because the search engine had returned that site as the first result suggesting considerable trust in these services. In some cases, the respondent regarded the search engine as the relevant entity for which to evaluate trustworthiness, rather than the Web site that contained the information (Hargittai, Fullerton, Menchen-Trevino *et al.* 2010: 479).

Students differ in the extent to which they understand the reasons behind search engine rankings. A female health-sciences major described her search routine as follows: “I usually click on the first thing that I see.” Asked to clarify how she decides to pick the first result, she emphasized, “Well, I know the ones that are [. . .] in here [pointing to the shaded Sponsored Link section on a Google results page] they’re the most relevant to what I’m looking for.” Interestingly, in this case she was pointing to a highlighted link labelled as a Sponsored Link by Google. While sponsored links may well be applicable to a search question, their placement on top of the results page is at least in part determined by financial incentives rather than solely relevance, a point the

¹⁰ ‘An anthropologist in the library: the U. of Rochester takes a close look at students in the stacks’, *The Chronicle of Higher Education* 53(50): A26, 17 August, <<http://chronicle.com>>, accessed 27 May 2011.

¹¹ I would like to thank the authors and publisher for providing me with a pre-publication draft of this volume.

respondent did not raise at all, presumably because she was unaware of it (*ibid.*: 484).

Most students do not ask for help with their library research from librarians (favouring advice from peers or instructors). This may be in part because they consider librarians ‘book experts’ rather than information specialists: ‘I would talk to a librarian when I need to find books. I can’t imagine anything else I would need them for . . .’ (Foster and Gibbons 2007: 10). ‘In the minds of students, librarians equal print’ (*ibid.*: 60). Other research suggests that most students face anxiety when asked to do library research and may avoid seeking help in order to save face, or may have not found satisfactory help in the past (Mellon 1986: 162; see Fister 2002; Vondracek 2007; Bridges 2008; Miller and Murillo 2011). Access to and use of scholarly research resources provided by libraries is not related to physical presence in library buildings, but is decentralized to many off-site locations, resulting in fewer opportunities for building librarian-researcher working relationships (Haglund and Olsson 2008: 55–6). There are fewer opportunities to engage and teach serendipitously or opportunistically as librarians have done in the past (Fister 2002).¹² From their perspective, the ‘library is for studying’ and that is generally the reason they visit and use library buildings. Finally, university students represent a diverse, heterogeneous population. Their habits and needs vary by discipline, demographics and other characteristics. In the following section, I consider the implications of these findings for libraries.

These overall findings, first and foremost, support the assumption that university students will benefit from a combination of library training sessions and information literacy courses to introduce several scholarly tools and support a strategic approach to their library research. Brief training sessions build awareness of the range of library resources and encourage more sophisticated searching skills with a variety of general and specialist research tools. Contact and familiarity with librarian instructors is most likely to reduce anxiety and create opportunities to build rapport, engage in informal teaching and build an understanding of librarians’ areas of expertise (including print and electronic information, as well as other formats). Insofar as these sessions involve interaction with academic departments, faculty and graduate students, they also provide opportunities to develop collaborative relationships among academics and library disciplinary specialists. One of the most important outcomes in workshops and short training sessions may be to introduce students to the librarian responsible for supporting their major discipline (or simply awareness that library disciplinary specialists exist), encouraging direct follow-up should they wish to seek assistance at a later date. Along with brief orientation and training sessions, there is a need for more formal and in depth course offerings, especially for graduate students and others who may need to develop their library research skills to a greater extent.

Information literacy courses for credit are available on a minority of North American university campuses (Owusu-Ansah 2004, 2007;

¹² An interesting response to the decentralization of library use was recently reported as ‘gaming the library’. An MIT professor purposely kept overdue books because students wanting them were sent to his office. He then interviewed them as potential assistants, knowing they shared an interest in his area of expertise (Harvard Library Innovation Laboratory 2011).

Gibson 2008).¹³ Given this situation, along with the lack of informal opportunities that used to be the mainstay of entry level library skills education (for example, intercepting apparently befuddled or lost students in the library), training in library research methods should be integrated into a variety of dispersed student activities. At my university library, the greatest effort for many years was directed at introducing about 1,100 first-year English enrollees to a single, scripted, hour-long library training session each semester (standard course number ENC 1101 in the State University System of Florida). This programme faced problems of scalability (Gibson 2008: 15), required constant management to schedule instructors and consumed a great deal of librarians' time. Librarians or staff members read standardized scripts directly to large sections of students with little assessment of what learning (if any) was taking place.

I am happy to report that since that time, things have changed. The library instruction programme at my institution has since become better integrated with academic departments and more collaborative with disciplinary instructors. A combined focus on training Teaching Assistants to themselves incorporate information literacy and specific library skills into the university's first-year writing courses is the current approach, providing online support materials directly to students and reducing the workload considerably for many librarians for whom instruction is not a primary assignment. As a result, academic librarians (with disciplinary expertise ranging well beyond the few English Department courses previously targeted for support) have been enabled to respond more creatively to student needs in their branches and disciplines with a variety of complementary strategies to improve information literacy in lieu of formal course availability. For example, many of my colleagues have done so by 'embedding' information literacy content into academic courses with instructors who collaborate with librarians to teach information literacy modules closely integrated with course content (Dewey 2005; Hine, Gollin, Ozols *et al.* 2002; Johnson, Clapp, Ewing *et al.* 2011; Love 2009), creating peer based instructional programmes (Deese-Roberts and Keating 2000), linking with campus common reading programmes (Shoop 2010) and integrating library training with electronic and social gaming (Russell Gonzalez, Davis, Dinsmore *et al.* 2008). Librarians at one institution offer a workshop promising training to 'Google like a librarian' (O'Kelly and Lyon 2011). While libraries should not simply offer users anything they want, 'our job is to learn how to reach them and teach them' (Seadle 2007: 618) in the current highly decentralized situation on university campuses.

These creative approaches have been an effective way to introduce basic information literacy concepts to a large number of university students, across many academic programmes. They are complemented by several additional strategies at my institution, including general and topical workshop offerings, advertised each semester for students motivated enough to seek out brief instructional sessions to improve their library research skills. Disciplinary or liaison librarians offer 'on demand' or 'drop in' instructional services as targeted one-to-one consultation sessions to support students in specific

¹³ About 30 percent of surveyed institutions offered such courses in 1995 (Holder 2010: 5). Contributors to Lau (2008) indicate that in at least some other countries, more comprehensive offerings are available.

programmes who request individual assistance, most often with a library research assignment in hand. Public service and other librarians and staff offer instructional sessions catered to specific class needs in library training rooms, in the academic department's classrooms, or elsewhere on campus. All disciplinary liaison librarians at my institution also provide online, web-based resources and guides (sometimes available through instructional course management software or as videos, which can be mediated by chat or telephone reference services). Together, these and similar efforts bring library instruction to users, where and when they need assistance, and provide a creative, varied and changing mix of instructional opportunities to a broad range of university students across all academic programme areas.

Beyond these valuable instructional efforts to provide assistance to individuals and groups, formal courses should be a part of the mix. French universities have established a comprehensive approach that has reduced attrition significantly among first year students (Lamouroux 2008: 141; Coulon 1999). Offering independent information literacy courses is not without controversy within US libraries (Holder 2010: 6), where many only support instruction that is well integrated with academic programmes. Establishing for-credit information literacy courses also may be hindered by the perception on university campuses that the need is for remedial or technical skills training, best addressed by laboratories, library workshops and other support units rather than the academic curriculum. However:

It is one thing to create a tutorial or hold a class to teach someone how to search a database. It is quite another to help that same person to navigate the troubled waters of the information revolution with such skill that the right information for the task is effectively and efficiently found, evaluated, and then used to optimum advantage within legal and ethical boundaries (Badke 2008: 7).

There may be no substitute for credit-bearing courses to improve the information literacy situation on campuses (Hollister 2010). While the concept of information literacy is popular and current in library literature (see: Badke 2008, Hine, Gollin, Ozols *et al.* 2002, Hollister 2010; Lau 2008, Mackey and Jacobson 2005, Owusu-Ansah 2004, Scales *et al.* 2005), the terminology is unfamiliar to most faculty in the academic disciplines that librarians serve. In introducing this concept outside of libraries, as I have done in this essay, I refer to 'library research methods'. This approach resonates well and appropriately with academic faculty and administrators as a strategic, contextual, adaptive and holistic approach to conducting library research within the context of a discipline, as opposed to simply training students in specific skills or techniques, which are vulnerable to obsolescence as information technologies change.¹⁴

¹⁴ My first success in this regard occurred over ten years ago when I applied to my university graduate curriculum committee to include such a course in the catalogue. The staff member responsible for collecting applications on their behalf told me that the committee would never approve a 'library' course at the graduate level. Fortunately, I had the full support of the director of our Center for African Studies and, together, we promoted it as a research methods course. This apparently made sense to the members, as it was approved. I have taught it each Fall Semester since with student course evaluation feedback that is consistently higher than the college average.

4. Teaching information literacy for African studies graduate students

I designed, and team-taught with my former colleague Peter Malanchuk for almost a decade, the course *Africana Bibliography* (course number AFS 5061)¹⁵ from the ground up to focus on library research methods (though it was named according to an earlier conception of library instruction). Since before we first taught the course in 2000, colleagues at institutions in Europe and the US have promoted directing Africanist librarians' expertise towards this approach to teaching 'rather than spending time creating narrow specialized bibliographies' (Johnsen 1998: 67).¹⁶ After discussing the history of the course at Indiana University, Marion Frank-Wilson explains that:

The focus of the class is no longer on how to find scarce, hidden materials, but rather to develop strategies and techniques to find a wide variety of materials ranging from print sources to oral accounts, as well as sources found in African archives; and, more importantly, to be able to evaluate these sources for their quality and relevance (Frank-Wilson 2004: 106).

I recognize the importance of adopting a strategic approach to teaching information literacy in African studies, addressing known library research behaviour patterns to improve student methods and success. While my approach has changed over time, the following themes guide my presentation of library resources introduced throughout the course. It can be a struggle to ensure that the class is not overwhelmed by a survey of resources or tools, but instead focuses on their strategic use according to a research plan. The sheer number and diverse range of such tools in a large academic library can distract an instructor into spending all available class time in describing useful resources and techniques for using them. Any serious attempt at surveying African studies reference resources requires book-length treatment and regular updating (see for example, Kagan 2005; Zell 2006b; McIlwaine 2007a). For a class, it is more important to maintain a focus on research strategies than specific tools: distinguishing between everyday searches of the open web and authenticated deep web searching that includes access to proprietary and scholarly databases; developing awareness of the range of potential library research tools along with an understanding of their appropriate use (based in part on the adoption of the research notes technique I describe below); and building a critical understanding of specialist African studies resources that includes an appreciation of the conditions that might limit African scholarship from discoverability. I also promote the contribution of some portion of creative and scholarly output to open-access resources as a way of building high-quality research repositories for use by African-based (and other) scholars who may not have the benefit of access to commercially published and distributed journals or other sources of scholarship.

¹⁵ The course syllabus is available online: <<http://guides.uflib.ufl.edu/content.php?pid=6493&sid=1480100>>.

¹⁶ This assertion was not accepted without controversy, according to Walsh (2004: 8). Kagan (1998: 69–72) offers a brief history of the small handful of such courses at universities in the US. Formal credit courses in African Studies research strategies are currently taught at three US institutions. Most have posted the syllabus and course materials on their web sites: University of Illinois at Urbana-Champaign, Indiana University Bloomington and University of Florida; a similar University of California at Los Angeles offering remains in the course catalogue but has not been taught for several years (see Walsh 2004: 87–8).

I begin classroom discussion from a familiar point, building on common understandings and adapting the emphasis as I become more familiar with students as the class proceeds (enrolment has averaged seven students over time, so it is easy to get to know everyone). Every student enters the classroom with some experience using Google and other online tools for everyday needs. A convenient place to begin conversations about planning library research is to ask questions about how they use Google. I volunteer that I use this search engine many times every day, leading discussion into how web searches function (conceptually, not technically) and the limits of what information is accessible to search engines. The information available to public users of Google can be called the open or 'surface' web. The invisible web, deep web or dark net refers to information available via the internet that is not accessible to general search engines such as Google (Wright 2009).

Access to such privately controlled information, which may be 500 times as large as the public information on the open web, may be hidden for all but peer-to-peer trusted users (possibly providing some protection for illegal or illicit activities), or limited by commercial databases that only generate web pages dynamically once a user is authenticated as a paying customer or a legitimate member of the subscribing institution (He, Patel, Zhang *et al.* 2007: 95; see King, Li, Tao *et al.* 2007). At public institutions, simply accessing the internet from a library computer may be enough to gain access to proprietary resources as a legitimate user (Mann 2005: xiv), but remote use requires accessing a proxy server, or preferably, the installation of a virtual private network (VPN) programme on the user's personal computer or mobile device. Because many experienced users of public resources available on the open web are not aware of the scale of the invisible web, understanding this distinction can be enlightening and a good initiation into the value of understanding why a strategic approach to library research is valuable. I point out that Google Scholar becomes a qualitatively different resource once logged into a university account so that library resources, including full text online books and articles, can become transparently and seamlessly linked to the citations provided by Google Scholar (see Google 2007) and other applications. This is a good point to discuss assessing source credibility through evaluation of authors' academic credentials, determining whether or not an article has been subjected to peer review and a consideration of publisher reputation, along with attention to appropriate citation practices in scholarly writing. In my experience, few if any graduate students have the naïve faith in Google's relevance sorting reported by Hargittai, Fullerton, Menchen-Trevino *et al.* (2010).

Scholarly researchers beginning work in a new area will benefit greatly by employing a simple but potent technique: keeping a list of search terms (such as key authors, titles, relevant keywords, subject terms, themes and concepts) derived from the sources consulted during their library research. This enables combining the advantages of many resources together, especially when multiple iterations of searches are repeated through a set of known reliable and promising new resources. This search notes technique creates a focused, dynamic aid to the researcher by collecting differing conceptual approaches across disciplines, spelling variations, alternate terms and the like. These are important issues in working with African subject matter, where the range of ethnic, geographical and other terms varies greatly over time, across disciplines and based on national traditions (see Kagan 2005; McIlwaine 2007a, 2007b).

Particularly troublesome are colonial names and their changes after independence, political splits and mergers and cases such as the Biafra War in Nigeria, which has been entered without the name 'Biafra' in Library of Congress subject headings (as: Nigeria – History – Civil War, 1967–1970). Other kinds of changes in naming practices occur within disciplines over time (Walsh 2004: 20–4, 25, 37). Gretchen Walsh's article is the best source I know of for focusing student's attention on the many ways that a seemingly good search effort can fail in the face of the realities that make research on African topics very difficult indeed and is the one source I require students to read.

In introducing library resources and building awareness of the range of scholarly research tools, I promote the approach advocated by Mann (2005), structuring my presentations to first introduce the value of reference materials and their proper use as a starting point for library research. One cannot develop an effective strategy for undertaking library research without some familiarity with the range of possible resources and a sense of how information is organized. Mann's guide provides a survey of the kinds of general and specialist reference resources available at a large academic library. I also present the main functions and goals of a library collection management approach, where responsibility for the intellectual scope and cohesion of a collection of library materials in support of an African studies academic programme is integrated (for example selection of materials within a known budget, control over the acceptance and rejection of gift items, decisions on location, prioritization for conservation, reformatting or de-accessioning, etc.) to provide an appreciation of the options and limitations for almost any library collection. I introduce other library functions as they relate to African Area Studies (e.g. cataloguing, preservation, digitization) and offer an overview of campus library collections, branches, organization and the location of materials in specific formats (audio and video recordings, government documents, maps, etc.). Because libraries organize collections differently, for many reasons, one may need to familiarize oneself with the general approach to a range of materials, subjects and formats prior to navigating the available resources at an unfamiliar institution.

The metaphor of navigating through an information landscape or environment is relevant, as there are many interrelated paths along which bibliographic materials can be considered. Each project suggests different sets of resources, so it is useful for the library researcher to be familiar with the possibilities beyond her current needs. For example, the history of publication in a given country may be documented in national bibliographies. My former colleague Peter Malanchuk suggests such a progression for Ghana with the 36-page *Gold Coast Library* (Cardinall 1924) listing 791 items, followed by the 5,168 citations from the 16th century to 1931 in the 384-page *Bibliography of the Gold Coast* published in 1932 (reprinted as Cardinall 1970), an effort to cover all publications on Gold Coast and Ghana from 1930–61 (Johnson 1964) and subsequent attempts at similar documentation by the Ghana Library Board with *Ghana National Bibliography*. This sequence demonstrates that as the corpus of national publications grows historically, the focus must turn to whatever more specialist reference tools are available, such as those represented by topical and disciplinary bibliographies. One also may consult selective individual country volumes such as those in the *World bibliographical series* (see, for example, Myers 1991). Where multiple editions of a bibliography are available, as McIlwaine (2007b) points out, earlier works are not necessarily

subsumed or updated by later efforts; they may remain the best documentation of an earlier period and therefore may demand consultation alongside more recent editions. Reading prefatory material allows the researcher to determine the coverage of a given work.

Another path across the bibliographic landscape is through the role of publishers. A country's early history of publication may follow a known institutional sequence, frequently beginning with colonial government printing (for example, Mozambique 1854;¹⁷ see also the archival microfilm collections of former British colonial government publications in the African Studies Association of the United Kingdom series *Government publications relating to African countries prior to independence*), or religious missions such as those documented in the *Records, 1799–1920* (Church Missionary Society 1960). When African governments and missions replaced and sold their printing presses, in some cases local entrepreneurs initiated private publishing such as the Onitsha market literature of Nigeria's Igbo speaking area, where readers newly literate in English were eager to buy inexpensive books (Obiechina 1973; see for example Nwosu 1960¹⁸). Elsewhere, governments promoted literacy in indigenous languages while maintaining control over content, as for example the colonial government did with Shona and Ndebele writing, through the Southern Rhodesia African Literature Bureau (later known as the Zimbabwe Literature Bureau), created in 1954 as part of the Native Affairs Department (Krog 2009).

As noted above, a comprehensive survey of African studies reference resources is beyond the scope of a semester-length course or an article (for exemplary efforts, see Kagan 2005; Zell 2006b; and McIlwaine 2007a). Key resources for beginning library research in African studies include these three titles as well as *Africa South of the Sahara*, an annual print encyclopedia published since 1971,¹⁹ which Africana Librarians Council members unanimously though informally agreed was the 'desert island' reference resource they would recommend for general use. The online Economist Intelligence Unit²⁰ database (with its extensive print back run) is another extremely useful resource for beginning a research project in an area that touches on politics or economy. One function it serves, as do *Africa Research Bulletin* and *Africa Confidential*²¹ (though there are independent reasons for careful consideration of each), is as a news digest that can provide a researcher with multiple starting points (specific dates, events, people, organizations and places) for more directed reading on historical events not indexed by other means.

After selecting and consulting promising reference sources, the best next step in tackling a new library research subject is to refer to the library catalogue. Familiarity with local catalogue features helps in many small ways (for example, conveniently providing records in your preferred citation format, sending lists of items to your email, or texting book locations and place references to your mobile phone) beyond simply finding books in the stacks.

¹⁷ *Boletim do Governo da Provincia de Mocambique* <<http://ufdc.ufl.edu/UF00095049>>

¹⁸ *Miss Cordelia in the Romance of Destiny* <<http://ufdc.ufl.edu/AA00004295>>

¹⁹ Now available as part of Routledge's Europa World online <<http://www.europaworld.com>>

²⁰ Economist Intelligence Unit <<http://www.eiu.com/>>

²¹ *Africa Confidential* <<http://www.africa-confidential.com>>

While up to half of searches are for finding known items (Tyckoson 1997: 11), the catalogue is also a powerful discovery tool for identifying unknown relevant materials by developing new research pathways, a process made more manageable by using the search notes technique described above. Being attentive to subject terms in the most relevant records retrieved can yield additional materials on the topic that may not be published with the same terms on your list (such as words in other languages, equivalent terms that vary over time, or usages that differ across disciplines). This is possible because cataloguers have assigned records with uniform headings.

Cataloguing ‘is a process of *adding* terms that are *standardized* “on top of,” or in addition to, the words provided by the book itself’ (Mann 2005: 23). Because in many libraries subject classifications are employed to shelve books in open stacks, browsing becomes fruitful and allows serendipitous discoveries (*ibid.*: 46–64). While Tyckoson estimates that 90 per cent of research content remains elusive from catalogue searches (1997: 11), improvements have since enhanced many records with chapter titles and authors, for example, e-books are a growing portion of many library collections and Google Books Search provides an automated full-text index of scanned titles (Darnton 2009: 33). The catalogue is a powerful research tool because it is a combination of technical, social and individual efforts that do not necessarily lead to perfect or perfectly transparent results:

For the individual scholar, academic research may seem to be a solitary, lonely pursuit, whether she is sifting through volumes of decades-old journals in the stacks or surfing the Web. In fact, successful research depends on the combined (if not always cooperative) efforts of widely dispersed people, often unknown to one another, including: authors, publishers, indexers, catalogers, reference librarians, as well as the researchers themselves. Decisions, policies, and practices of any of these many actors affect the success of research (Walsh 2004: 14).

For scarcely treated topics, local resources may not be available or will not suffice, so researchers can search multi-library ‘meta-catalogue’ databases such as WorldCat,²² the catalogues of institutional consortia, or membership groups such as the Center for Research Libraries for leads on access alternatives such as inter-library loan.

The strategic cycle I recommend concludes with a consultation of academic journal indexes, including specialist indexes that may simply identify relevant scholarly work as well as convenient integrated index databases that provide access to entire full-text articles. Academic faculty may not need any other resources than journal indexes (possibly accessed via a Google search) if their field relies primarily on journal publications (for example, some physical sciences). They may even forget to advise students to follow the library research pathway outlined here. As full-text resources have become increasingly accessible by means of index databases, the allure of skipping directly to the online journal literature has grown. However, inexperienced researchers may get lost in the specificity of scholarly articles before they have fully integrated a sufficiently broad understanding of their field of study. To simply access a

²² WorldCat < www.worldcat.org/ >

known article, JSTOR²³ (which includes an excellent set of African studies journals in its database) may be the best first place to go. However, in many cases there is a ten-year embargo on articles in JSTOR. For this reason and because full-text searches in JSTOR depend on the accuracy of Optical Character Recognition (OCR) software (the often cited figure of 98 per cent accuracy produces errors in two or three words per page), I do not recommend it as a primary search tool.

Students should become familiar with a variety of general use, comprehensive or discipline-specific, commercially distributed journal index databases. Many include good coverage of African articles and provide interface features that help to build good searches. Such tools include EBSCO Academic Search Premier,²⁴ Cambridge Scientific Abstracts²⁵ (with the Linguistics and Language Behavior Abstracts and PAIS International), ProQuest Dissertations & Theses,²⁶ the Web of Knowledge²⁷ interface to, for example, the Social Science Citation Index and Periodicals Index Online.²⁸ Any of these commercial products provide access to their index thesauri of descriptor terms, which work analogously with subject headings in the library catalogue to add relevant terms not accessible to software such as OCR that merely reproduces terms the publication itself provides to readers (Mann 2005: 66–7). I recommend that searches in these large databases should be complemented by additional work with Africa-specific, human specialist-prepared bibliographic tools such as African Studies Abstracts (Leiden University),²⁹ the US Library of Congress Quarterly Index of African Periodical Literature³⁰ and Africa Bibliography³¹ (International African Institute, IAI). *Africa Bibliography* has been available as an annual print supplement to the IAI's journal *Africa* since 1984, but this year it is also available online as a searchable, consolidated bibliography. One of my students last year noted that the pre-release version of this database had become her preferred journal index.

Employing a strategic combination of several scholarly, specialist tools such as disciplinary, regional or topical bibliographies along with one or more comprehensive, commercial journal index databases is advantageous in that the user benefits from their different approaches. For anthropology, Anthropological Literature is produced by the Tozzer Library at Harvard University's Peabody Museum of Archaeology and Ethnology and the Anthropological Index at the Royal Anthropological Institute in London (their contents are combined by the Anthropology Plus database).³² These academic projects use experts to consider and describe each entry, assessing scholarly import and writing abstracts. While their interfaces may be less friendly and it may take time to learn how to build an effective search with these, efforts are

²³ JSTOR <www.jstor.org/>

²⁴ Academic search premier <<http://www.ebscohost.com/>>

²⁵ Cambridge Scientific Abstracts <<http://www.csa.com/>>

²⁶ ProQuest Dissertations and Theses <<http://proquest.umi.com/>>

²⁷ Web of Knowledge <<http://wokinfo.com/>>

²⁸ Periodicals Index Online <<http://pio.chadwyck.co.uk>>

²⁹ African Studies Abstracts <<http://www.ascleiden.nl/>>

³⁰ Quarterly Index of African Periodical Literature <<http://lcweb2.loc.gov/misc/qshtml/>>

³¹ Africa Bibliography <<http://africabibliography.cambridge.org/>>

³² Anthropology Plus <<http://www.oclc.org/us/en/support/documentation/firstsearch/databases/dbdetails/details/AnthropologyPlus.htm>>

rewarded by the insights they make possible through human-created descriptive records. In contrast, for example, AnthroSource³³ represents the benefits of large-scale commercial technology, leveraging the resources of publisher Wiley-Blackwell to index every term in each of over a quarter million full-text articles from every American Anthropological Association publication included in this service. The database is accessible through a richly featured interface that can link the user to a phrase or term as it was printed on the page in context. There is no one best index, but rather researchers should employ several relevant products that complement one another's strengths to enable effective searching and results that no single source can provide.

It is unlikely that anyone's library research will be complete at this stage of the model unless the project is very straightforward. The process described above is intended to be iterative, rather than merely repetitive, honing existing and building new searches with each re-entry into the set of available tools and resources. Individual needs will determine which additional general, specialist, discipline-specific and other resources should be considered as the project develops. Mann (2005) provides many ideas for additional potential directions, including government documents, newspapers, archives, etc. For African studies, to name a few examples, unique materials may be found in the Aluka³⁴ database of materials relating to *Struggles for Freedom in Southern Africa*, in microfilmed archival collections collected by the Cooperative Africana Materials Project³⁵ and in the rare books and manuscripts collections of academic libraries specializing in African materials (many of which are being selectively digitized for free, public, open access throughout the world).³⁶ Academic dissertations are another somewhat neglected source of detailed literature reviews that may lead to collections of unique materials. Graduate students in particular may find dissertations useful for developing an understanding of theoretical approaches over time, recognizing schools of thought and intellectual genealogies, and gaining a sense of how concepts are shared or alternatively formulated by different scholars. It may be productive for the student to speak with a specialist librarian at this point in the process to discuss research efforts to date and consider further options. Many librarians can also provide assistance with managing bibliographic citations through software packages that are licensed to the entire university community.

The modern information landscape is complex; the African studies information environment is even more difficult to navigate than most (Zell 2002; Walsh 2004). The growing but thorny research and publishing environment in Africa itself contributes to the difficulty of scholarly research in this area (see Zell 2001; Mlambo 2006):

That is not to say that little is being published in Africa. Indeed a great deal of very good material is regularly published, but the viability of publishers

³³ AnthroSource <<http://www.anthrosource.net/>>

³⁴ Aluka <www.aluka.org/>

³⁵ The Cooperative Africana Materials Project (CAMP) was founded in 1963 as a joint effort by research libraries throughout the world and the Chicago-based Center for Research Libraries <<http://www.crl.edu/area-studies/camp>>

³⁶ My work with the George A. Smathers Digital Library Center at the University of Florida has provided online access to several collections based on rare books and manuscript holdings in the library's African Studies Collections (see Nemmers 2004; Reboussin 2009, 2011a, 2011b).

continues to be threatened by general resource shortages, instability, poorly developed distribution, and domination of markets by transnational publishers with little interest in areas such as African language imprints. The effective reach of new technologies within the continent has also been limited, cramping the visibility of African publishers and writers (Limb 2007: vii).

For scholars interested in reading African published research and incorporating African perspectives into their work, there are many potential broken links in a chain from the conduct of research, writing, publishing, distribution and access to such materials in libraries.³⁷ If, in fact, African produced materials do arrive in one of the few libraries that collect and catalogue African-published academic materials, access may remain difficult; they may require special treatment, are located separately from general collections, or are not well catalogued. African books and journals present many challenges: they may be written in lesser known languages without readily available translations or use orthographic scripts without standardized electronic (i.e. Unicode) equivalents. Authors' names may use unfamiliar conventions or may be found in many versions based on differing transliteration practices (Walsh 2004: 15–21). Publishing information may not be available in a familiar language; serial publication may be late or documented inconsistently (with name variations, problems with volume and issue numbering, or pagination). So, even when African research materials are collected by libraries where scholars might be better positioned to discover, recognize and promote their significance (*ibid.*: 11), they may remain less visible within the scholarly archive than other resources. As a result, Africanists need to be better trained and more persistent with library research relative to their colleagues in other areas.

Additional difficulties in the research process are posed by the broad scope of interests in the highly interdisciplinary field of African studies. Faculty and graduate students make challenging demands on their libraries to collect and provide access to extremely diverse formats and sources of information. Video and audio recordings, photographs, unique and reproduced manuscript collections, grey literature such as conference papers, non-governmental organization reports and digital data files are relatively common requests. Even official national government documents may have extremely limited distribution in Africa, where it may be very expensive to collect even reasonably comprehensive collections of such key resources as census documents. The above formats do not touch upon ephemera such as election materials, posters, political pamphlets, art and popular culture items, children's toys, graffiti, advertising, or sports memorabilia and 'fan' paraphernalia such as the popular decorated hardhats and *vuvuzela* horns relating to the 2010 FIFA World Cup soccer (football) tournament held in South Africa, which drew the research attention of many Africanists (see Alegi 2010; Koonyaditse 2010). Identifying and accessing unusual formats and scarce materials, even when they are held in the user's own library, may require greater expertise (and possibly a librarian's guidance) as they most likely would not be described at the individual item level

³⁷ Remarkable improvements in access to African publications in the US and elsewhere have resulted from the collaborative efforts of the African Books Collective <<http://www.africanbookscollective.com>>.

in the catalogue, but rather as collections (as is most common for manuscripts and archives, although digitization requires item level metadata for online access).

The mediation and assistance of a librarian can be a critical element in the library research process. Scholarship is a social process that depends on the contributions of many participants. Good practice in documenting one's research and data sources is necessary, as is the maintenance of sufficiently resourced archives that can manage and provide access to whatever resources that academic research and scholarship demands. As these demands have increased and the information environment has become more complex, the need to improve training in information literacy for African studies researchers has also become more evident. An important benefit of increased interaction between academics and librarians is that opportunities for collaboration multiply as librarian roles in the scholarly process become more familiar and better appreciated.

African scholars in Africa may themselves lack the resources to participate fully in debates about issues and processes that affect them, so many Africanists outside the continent feel an ethical obligation to ensure that African voices are heard and documented through their own scholarly communications. African book donation programmes and funding are dwindling. Given the many new avenues provided by electronic distribution of information, students and faculty can contribute in some small measure by making a conscious effort to deposit their own work in open access digital institutional repositories and other publicly available online archives that ensure reliable access to research of value to Africans where African scholars themselves may lack access to paid subscription resources or donated materials. In this context, I consider a discussion of the legal and moral rights of both users and creators of digital information to be an essential part of classroom discussions about African research resources. In this and many ways, I hope the students in my class will begin to think of themselves as not only consumers of African information, but also will consider the effect of their own participation in information production in cooperation with Africans as a result.

Conclusion

While the few available courses in African studies library research methods used to focus on the technical use of a few scarce resources, the information environment has changed a great deal in recent years. There are many potential resources available to African studies researchers, but these can be difficult to identify, evaluate and use effectively without employing a strategic approach to library research. Many library users report high skills levels at searching for information online (through surveys, for example), but behavioural research among students pursuing library research indicates that their search skills are better suited to everyday online tasks. Students benefit from training in library research methods and an improved awareness of scholarly search techniques, and there are indications that the completion of an information literacy course lowers attrition rates among first-year students. For African studies, every aspect of library collections in support of these highly interdisciplinary academic programmes presents greater challenges than do materials in other areas: from their creation as research projects, the challenges of African

publishing, limited distribution and marketing, the difficulties of languages and other cataloguing issues, to the broad range of formats of interest to scholars. In this essay, I have attempted to summarize and provide a sense of the approach that I take in my library research methods course for graduate students with the hope that these simple strategies and concepts can be integrated into other African studies courses more broadly in the interest of better library research and scholarly communication.

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