The Narrative of Research as a Tool of Pedagogy and Assessment: A Literature Review

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The LaGuardia Library has offered its three-credit course, Information Strategies (LRC102), as a Liberal Arts elective for over twenty years. The term project for the course is an annotated bibliography of materials that would serve to answer a selected research question in a ten-page research paper. Writing the research paper itself is not a requirement of LRC102 but the annotated bibliography must be accompanied by a “narrative of research” in which the student describes the process used to find each item in the bibliography and explains its inclusion.

The informal rationale for assigning the narrative of research is twofold: pedagogy and evaluation. As a pedagogical tool, the narrative serves as a reflective exercise in which students recount in detail the process of conducting a substantial research project (the bibliography). The reflective essay makes students conscious of the process of research; it helps to focus students’ attention on what they are actually doing when they develop a research question, choose a database or search engine, select keywords, revise searches, evaluate materials, and so on. As a kind of ‘capstone’ assignment, a narrative of research touches on all of the IL [information literacy] competencies.¹ (Fluk, Egger-Sider, and Rojas 183)

In addition, the narrative of research provides students with much-needed reinforcement of writing skills.

As an evaluation tool, the narrative of research provides the instructor with insight into student thinking about research and student practice of research skills. The narrative helps to evaluate what the student has learned. Often, it provides more information than a research paper or annotated bibliography about the level of a student’s information literacy. In addition to summative evaluation of student accomplishment, the narrative of research also provides instructors with important course evaluation data.
However, these reasons for assigning the narrative of research in LRC102 have indeed been “informal,” based on a largely unexamined set of assumptions that seem logical and have often been confirmed anecdotally, but were not grounded in any qualitative or quantitative research. With the advent of institutional outcomes assessment at LaGuardia in the last decade, the Library has felt the need to revisit the issue of the pedagogical value of the narrative of research.

LaGuardia’s outcomes assessment plan mandates rubric assessment of seven core competencies, among them “research and information literacy” (LaGuardia 121). The target of the assessment is student work of various kinds and from various disciplines, deposited electronically in an ePortfolio “assessment area” and made available anonymously to faculty raters. Between 2004 and 2006, a committee of LaGuardia faculty developed an “Information Literacy (IL) Rubric” to test three learning outcomes distilled from the ACRL Standards (Fluk, Egger-Sider, and Rojas 197–200). These three learning outcomes are:
1. determining information needs and searching effectively,
2. evaluating sources effectively, and
3. using information ethically.

Outcomes 2 and 3 can, uncontroversially, be tested using traditional research papers and citations/bibliographies from any field of study. But the rubric specifies that learning outcome 1 should be tested using student narratives of research and, while few dispute the value of narratives of research as an assessment tool, most faculty in other disciplines remain unconvinced of their contribution to student learning, as distinct from the assessment of student learning (Fluk, Egger-Sider, and Rojas 183). Therefore, narratives of research are assigned by only a few faculty members outside the Library. Since LaGuardia’s outcomes assessment plan requires evaluation of core competencies across the disciplines, the lack of examples of such student work from a variety of courses constitutes a severe limitation of the IL rubric.

Rather than going back to the drawing board and revising the IL rubric, it seemed worthwhile first to conduct a literature review looking for recent studies2 of the validity of the narrative of research as a pedagogical and evaluative tool and for examples of its practical application in institutions of higher education. Do narratives of research have sufficient pedagogical value to warrant their use in courses across the college? The hypothesis of this paper is that such a literature review will strengthen the “informal rationale” upon which the Library faculty has
long based its use of narratives of research in LRC102 and may convince other faculty to add such narratives to their arsenal of techniques for promoting student learning.

The Scope of “The Literature”

The notion of conducting a literature review about the pedagogical and assessment value of narratives of research and their use in higher education is fraught with unexpected complications. To begin with, what is the scope of “the literature”? Traditional literature reviews range over published research materials – books and journal articles in print and online – on a given topic. However, on the topic at hand, there is, in addition to academic books and articles, an enormous “literature” that is relevant but hard to survey. Websites abound on information literacy instruction, on pedagogy in various other fields, and on assessment in higher education, but none is devoted to narratives of research in instruction in any field. In addition, while course syllabi in any number of disciplines also abound on the Web and could be good sources of data about use of research narratives in instruction, the syllabi vary wildly in the information they provide. Few provide more than limited details about their assignments and fewer still provide any explanatory rationales. And what of “unpublished” syllabi – those buried in password-protected course management systems and those still distributed on paper only? These syllabi are completely beyond the scope of a literature review, but a survey questionnaire addressed to teaching faculty might yield interesting data on the actual use of narratives of research. This paper will focus on the published literature but will also attempt to take into account important Web documents and syllabi.

Defining Terms

The second complication of conducting a literature review about “narratives of research” is that very few use that terminology. Indeed, a Google search for the two keyword phrases, “narratives of research” and “information literacy” yielded all of five documents, three of which were generated by or descriptive of activities at LaGuardia and one an extract from a guidelines document about the ACRL Standards. Even the Standards do not include the phrase “narratives of research,” although Standard Four, Outcomes 2a and 2b provide a clue to alternate terminology:
The information literate student . . .
- Maintains a *journal* or *log* of activities related to the information seeking, evaluating, and communicating process
- *Reflects* on past successes, failures, and alternative strategies

(Association 13, emphasis added).

A wide variety of terms is used to describe what LaGuardia has called narratives of research. Among the “Informal, Exploratory Writing Activities” Bean discusses are journals, notebooks (including double-entry notebooks), reading logs, diaries, daybooks, learning logs, semistructured journals, and guided journals (chap. 6). Other permutations include: reflective research journals, reflective journaling, research journals, learning journals (Woodward; Wagner; Boud, “Avoiding” 125; Smith; Hutchins 175; Walker; McGuiness and Brien; Brown, et al. 285), personal journals (Woodward 416; Edwards and Bruce, “Panning” 366; Brown, et al. 285), search reports (Edwards and Bruce, “Assignment”), “personal notebooks . . . thinkbooks” (Fulwiler 2), research process journals (Gratch Lindauer 125), research essays (Beck 18), research notebooks (Donnelly 30), process writing, process logs, research logs (Quantic; Woodward 416; Macaluso; Sharma), process analysis (Angelo and Cross 307–10), learning diaries (Jarvis 79), logbooks (Rutherford, Hayden, and Pival 436; Shapiro and McAdams), and search diaries (Smith). Some instructors enliven the assignment with less generic names: “I-Search Paper” (Donnelly 33; Jent), “Paper Trail” (Burkhardt, MacDonald, and Rathemacher, chap. 9; Nutefall), “List of Information Tools Used” (Cooney and Hiris), research portfolio (Minneapolis), and pathfinders (Morgan and Peoples).

The variety of nomenclature is not simply a testimony to the riches of English synonymy. Different terminology may imply different instructional purposes and even different pedagogical philosophies. For purposes of this review, the following definitions, of *research logs*, *journals*, and *portfolios*, will help to sort out the issues:

*Research Logs*: Logs are, according to Wagner, the least “reflective” form of journaling, largely, though not exclusively, descriptive (263). They constitute a record of questions asked, information resources consulted, twists and turns of search strategy, and answers found – or not (Joyce and Tallman, qtd. in Jent, 34; Gilinsky and Robison 408); a “written account of the progress of the research process” (Rockman 57); a record analogous to a reporter’s notebook (Lampert 352); the story of a research journey, with the logbook as the “suitcase” (Shapiro...
and McAdams 129–30). LaGuardia’s version of the assignment has been a narrative but the research log can be an outline (Angelo and Cross 310), short answers to guide questions (Choiniski, Mark, and Murphey 573–74; Cooney and Hiris 230–31), or even an oral presentation about the topic researched and problems encountered in finding information (Jacobson and Xu 33–34). At least one source advises against the narrative form, lest the project overwhelm the assignment it is meant to support (Angelo and Cross 310). And, in the I-Search paper, the research paper itself tells the story; it is scaffolded by a log/journal of search strategies and reflection (Jent).

**Journals:** Journal writing resists precise definition, especially since it has been adopted in many different fields of study for a variety of purposes (Walker 216–17). It derives its essential nature from the French word for “day” (*jour*), a root it shares with the word “journey” (English and Gillen 87). Journaling is writing about quotidian experience, but not only in the descriptive sense of an events log. The “journey” – in our case, the research journey – has a goal, and writing thoughtfully, i.e. reflectively, about the messy process of reaching that goal is a way of “turning experience into learning” (Boud, “Using” 10).

However, reflection is also a notion that resists precise definition because it has a variety of purposes. Derived from the Latin *reflextere*, “to bend or turn backward,” reflection connects experiences and existing knowledge to create new knowledge (Gillis 50–51). In fields such as athletic training (Walker), librarianship (Farmer), nursing (Gillis; Brown, et al.), social work (Boud, “Avoiding”), and teacher education (Wagner; Woodward), the aim of reflective journaling is professional growth. In secondary and college classrooms, reflective journaling is assigned to improve learning of material, understanding of ideas, and student writing (Fulwiler) and as a metacognitive tool, requiring students to think about their thinking (Jent). Reflective journaling is both “writing to grow” (Holly, cited in Wagner 263), and “writing to learn” (Jacobson and Xu 72–75; Smith 26). In information literacy education, reflective journaling is less about personal growth than about foregrounding the research process, making students aware of that process and, thereby, improving it (Beck 18; Sharma 132).

**Portfolios:** The definition of portfolios developed by Paulson, Paulson, and Meyer is widely quoted in the literature of information literacy education (Fourie and van Niekerk, “Using” 335; Snively and Wright 300; Jacobson and Xu 122; Fourie and van Niekerk, “Follow-up” 110):
A portfolio is a purposeful collection of student work that exhibits the student’s efforts, progress, and achievements. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student self-reflection. (60)

At the risk of oversimplifying, this paper views journals as research logs *cum reflection* and portfolios as journals supplemented by additional documentation of student “efforts, progress, and achievements.” The “narrative of research” in the original research question for this review becomes the research log and/or research journal, the latter incorporating a limited form of metacognitive reflection, namely the practical reconstruction of the student’s research process.

**Extent of Research Log Use in Information Literacy Education**

Research logs and journals seem to be an underutilized tool of either pedagogy or assessment in IL education. Holliday and Martin reviewed 192 syllabi for general education courses to identify where students at Utah State University were being exposed to IL instruction. Fewer than half of the syllabi showed any IL assignments; most of those were research papers, none research logs. O’Hanlon got similar results in a study of syllabi at Ohio State University. Hrycaj analyzed 100 online syllabi for credit courses offered by academic libraries, counting the “assessment techniques and teaching methods” used; research logs are not among them although they may be subsumed in the category of “final projects” or “in-class projects” (529). Catts elaborates on a list of “methods of assessment” of IL (274–78) and Meulemans reviews the literature of IL “learning assessment methodologies” (68–70) but neither includes research logs. Kapoun surveyed 320 libraries in four-year colleges regarding their assessment procedures, receiving responses from 57 libraries (19%); none mentioned research logs. In an important ACRL survey of *Assessment in College Library Instruction Programs*, conducted in 2001 (Merz and Mark 29), 94 of 158 responding libraries (59%) reported that they assess instruction. Of those 94 libraries, only 27 (28.6%) did assessment using research logs or reflective writing about process. Finally, a recent review by this author of 341 assessment-related pages from the websites of higher education institutions listed in the meta-site *Internet Resources for Higher Education Outcomes Assessment* (Schechter) found that only 29 (8.5%) refer to research logs.
Nevertheless, important examples of research log assignments exist and enthusiastic support for such assignments can be found in the literature. One of the best-known exponents of IL education, Tom Eland of the Minneapolis Community & Technical College (MCTC), has developed a “Research Portfolio” assignment that faculty in any field can use to teach and assess student research. Note that, although Eland calls the assignment a “portfolio,” it actually meets the definition of a research log/reflective journal adopted above. Guidelines, a completed sample, and an assessment rubric appear on the MCTC Library website (Minneapolis). MIT’s Materials Science and Engineering Program offers a freshman course in “Information Exploration,” in which each of six assignments includes a research log. The logs account for 30% of the course grade (MIT). Several college libraries recommend research logs to faculty as alternatives to term paper assignments, among them the College of Staten Island, San Jose State University (SJLibrary.org), and Touro College. Without a serious survey of the field, however, it is impossible to gauge how representative these examples of the use of research logs and journals are in higher education practice.

**Rationale for Using Research Logs: Pedagogy and/or Assessment?**

The apparent paucity of research log and reflective journaling assignments in information literacy education is surprising considering the enthusiasm for them exhibited in the literature. Much of this literature treats research logs and journals as pedagogical tools to improve student skills rather than as tools of assessment. Thus, the *Guidelines for Using Journals,* adopted by the National Council of Teachers of English in 1986, were created “for strong pedagogical reasons, based generally on . . . assumptions about the connections between thought and language” (Fulwiler). Beck describes a research essay as a “meta-learning” activity (17). Edwards and Bruce found that assigning a reflective journal and a search process report helped students progress through stages of information-seeking that they identified as “looking for a needle in a haystack,” “finding a way through the maze,” and “using the tools as filter,” on their way to the highest level, “panning for gold” (*Assignment*; “Panning”). Jacobson and Xu identify logs and journals as examples of “writing to learn formats” (74). For Jent, the I-Search journal became a “vehicle for understanding my complicated topic . . . I became a better thinker, a more impartial evaluator of my own work, and a better writer” (74). Rutherford, Hayden, and Pival describe WISPR (Workshop on the Information Search Process for
Research), a tutorial developed at the University of Calgary based on Carol Kuhlthau’s research into the Information Search Process (ISP). Each phase of WISPR includes a “logbook” in which students record and reflect on their ISP, leading “to a better understanding of searching and a more critical evaluation of tools, techniques, and sources used in the process” (436). Finally, Jackson, mapping the ACRL IL competency Standards to Perry’s stages of cognitive development, sees research journals as helpful to students in the dualist and multiplist stages (55, 57).

Several more sources view research logs and/or journals as tools of both pedagogy and assessment. In a paper that predates the Internet and hence sounds rather quaint on the subject of research, Diana Quantic finds that research logs serve both student and professor. Students are “forced to think about how they [do] their research,” discovering their own strengths and weaknesses (223), and instructors can analyze the problems students are having and respond to them. Two papers analyze collaboration of librarians and English faculty to integrate student research and writing: Smith quotes both Fulwiler on journal writing as a way of thinking (22) and Caposella on journal writing as a way to promote “cognitive maturity” (23, cf. Jackson). At the same time, she acknowledges an assessment component: journals provide instructors with information which can be used to improve future assignments and service (25). Likewise, McMillen and Hill encourage the use of “research journalizing” in composition classes both to make students aware of the recursive nature of research (16) and to provide a “diagnostic for the research process” (19). According to Rockman, keeping a log or journal

support[s] information literacy skills by developing the complementary skills of reflective thinking, analysis, decision making, problem solving, and writing [and] becomes a tool for evaluating the information, the search process, and the learning that took place. (57)

Shapiro and McAdams found that “[s]tudents who spend time each week reflecting upon the progress of their research, next steps, and what they are personally learning about the process, in a journal or logbook, have better projects and take away more value from the experience” (139). In addition, “the logbooks . . . were of research interest in and of themselves and could be used as an evaluation tool” (130). In a recent study of a business capstone course, Gilinsky and Robison argued both
that “[r]esearch logs facilitate student learning” (412) and that the “reflection paper – essentially a self-assessment of what an individual student learned about IC [information competency] – can also be said to be a narrative evaluation of the efficacy of the IC component in the course” (410).

A few sources treat research logs and journals as tools of assessment only: Macaluso considers journaling and process writing as ways of authentic assessment of IL competencies. In a graduate business course, Cooney and Hiris assigned an annotated “List of Information Tools Used” which they consider indispensable for assessment of information competency (222). In a political science course, Hutchins notes that “[r]equiring students to identify how they found and obtained their resources was extremely useful in informing future library instruction and affirming its value” (177). The strongest argument for reflective journals as an assessment tool is made by McGuiness and Brien who studied research journals created by 109 freshman students at University College Dublin, concluding that they “provided wonderful insight into how students cope with researching and writing academic essays” (37).

By contrast, the literature of IL education views portfolios chiefly as assessment tools, not only of student work but also of the design of assignments, delivery of instruction, and course syllabi. The pedagogical purpose and value of the portfolio lie in the products within it – including research logs, journals, and draft and completed assignments in any format – as well as the “purposeful” act of selecting those contents (Paulson, Paulson, and Meyer). This distinction explains why, in the literature of information literacy education here surveyed, the great majority of sources discuss use of portfolios for assessment (Fourie and van Niekerk, “Using”; Middle States 48; Snavely and Wright; Gratch Lindauer 125; Nutefall; Fourie and van Niekerk, “Follow-up,”; O’Hanlon 176; Radcliff et al. 131–42; Scharf et al.; Sonley et al.). Just three sources discuss the research portfolio as a learning tool but, with regard to two of them, the assessment theme persists. Donnelly describes “research notebooks” – essentially portfolios – as learning tools. In Teaching Information Literacy (86–96), Burckhardt, Mac-Donald, and Rathemacher describe the “Paper Trail Project” developed at the University of Rhode Island (“The Paper Trail”). A year later, Nutefall published an article about an adaptation of the Paper Trail assignment as a method of information literacy assessment. In the same vein, Sharma’s article discusses the use of portfolios both to teach and to assess IL skills.
Disadvantages of Research Logs and Research Journals
As noted above, most of the literature views logs and journals in a positive light. A few authors also note the disadvantages of these assignments, chief among them the time required of both students and instructors (Wagner 270; Macaluso 48; Bruce, Edwards, and Lupton 12; Contreras-McGavin and Kezar 73; McGuiness and Brien 37; Radcliff et al. 129; Sonley et al. 48). The need for clear articulation of tasks and grading is noted by Macaluso (48) and McGuiness and Brien (37). Students need to be convinced that the exercise is not just “busy work” (Radcliff et al. 133; Sharma 133; Gilinsky and Robison 412; Mills). It is possible that the apparent underutilization of research logs and journals discussed above is due to additional drawbacks not articulated in the published literature. Certainly, however, the pedagogical value of research logs and journals asserted in the literature seems to outweigh the drawbacks and to warrant instructor efforts at mitigating those drawbacks.

Conclusion and a Caveat
The preponderance of articles here reviewed tend to support the “informal rationale” of LaGuardia Library faculty for using “narratives of research” (read: research logs and journals) as a pedagogical tool. However, it must be noted that few of the articles are based on broad and rigorous empirical research: They provide valuable literature reviews, experiential or anecdotal evidence, case studies, and analysis of pedagogical theory, but few present the results of research studies. Writing in 2001, the editors of Promoting Journal Writing in Adult Education, a collection of articles entirely devoted to the topic, asked:

[W]hy is so little empirical research available on journal writing? . . . all those who contributed to this volume have used journal writing in their classes, yet none of them offers data, beyond those collected anecdotally, to support the use of journal writing. (English and Millen 89)

Since 2001, some empirical research relevant to the use of research logs and journal writing has been published in the literature of information literacy education: Case studies of single courses predominate, with student performance and student satisfaction as the main objects of study (Cooney and Hiris; Nutefall; Sharma; Sonley et al.; Gilinsky and Robison). Edwards and Bruce have used phenomenographical tools to
study how students experience and understand the research process and the implications of the results for IL education. They concluded that logs and journals constituted “the assignment that triggered change” in student search processes (Assignment; “Panning”). Scharf and her colleagues developed a performance-based assessment instrument to test the IL skills of a sample of students close to graduation at New Jersey Institute of Technology. One of the outcomes was insight into changes needed in IL instruction: “We learned that class assignments must make the research process explicit, so we will experiment with research journals and annotated bibliographies . . .” (471).

There is no doubt that further research should be done into how research logs and journal writing affect student learning and how best to assign it. But there is also no doubt that research logs and journals can and should play an important role in information literacy education and assessment.

NOTES
1. Refers to the IL competencies delineated by the Association of College and Research Libraries in its Information Literacy Competency Standards for Higher Education (aka ACRL Standards).
2. With the exception of a few articles cited in later works, the materials in this review were issued in or after the year 2000.
4. The fifth result of the Google search was unrelated.

WORKS CONSULTED


