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## Fostering Self-Regulated Learning at the Reference Desk

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# Fostering Self-Regulated Learning at the Reference Desk

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Guest Columnist

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**T**hose who assist undergraduates at the reference desk know how tempting it can be, especially under time pressure, to find sources or perform on-line database searches for them. At the same time, reference librarians are likely to spend a significant number of classroom hours each week teaching undergraduates how to find, evaluate, and use information.<sup>1</sup> The question arises: is it logical or effective for librarians to instruct students in information literacy if they then undermine that instruction at the reference desk?

The independent research skills that are an integral part of the Association of College and Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education have a great deal in common with the educational concept of self-regulated learning.<sup>2</sup> A self-regulating researcher is able to formulate a research plan as well as monitor and control progress toward the completion of the research.<sup>3</sup> Furthermore, this self-regulation is an essential aspect of information literacy that is short-changed when librarians, with the best of intentions, insist on finding answers for students.

This article focuses on the one-on-one nature of reference interactions, and how they relate to tutoring interactions. It argues that, in approaching reference interactions as tutorial interactions, librarians can scaffold the self-regulation of student researchers and thereby more effectively support their emerging information literacy.

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## REFERENCE SERVICE: TO TEACH OR NOT TO TEACH

Two contradictory views regarding the function of library reference services commonly surface in the library literature. This dichotomy was essentially expressed more than forty years ago in the title of Anita R. Schiller's 1965 article "Reference Service: Instruction or Information."<sup>4</sup> Schiller argues that librarians should focus on "providing direct answers to questions" and that instructing users at the reference desk confuses them with regard to what service they may expect.<sup>5</sup> Schiller also appears to blame librarians' self-defined instructional role for the inability of patrons to voice their information needs.<sup>6</sup> (This argument is effectively refuted by several subsequent articles and studies that show that the inability to articulate an information need is common at the beginning of the information search process.<sup>7</sup>)

William Katz, in the 1997 edition of his well-known reference guide *Introduction to Reference Work*, states unequivocally that "bibliographic instruction is incompatible with the

concept of helping and solving problems for the individual. The reference librarian can do one or the other, at least consistently, but not both.<sup>8</sup> Wilson calls the teaching role of librarians an “organization fiction,” essentially a self-perpetuating, quietly accepted lie.<sup>9</sup> In addition, Miller and Rettig equate instruction librarians who practice instruction with outmoded products, claiming that librarians should keep users dependent upon them in order to forestall possible obsolescence.<sup>10</sup> However, Neilsen correctly predicted that the increasing access to information in online databases, while not necessarily improving users’ effectiveness at finding quality information, would render moot any such attempts.<sup>11</sup>

According to Wagers, these artificial distinctions between reference service and library instruction have “limit[ed] the range of legitimate service.”<sup>12</sup> Significantly, Rettig, Rice, and even Katz in a later edition of his reference guide, do support the instructional role of librarians at the reference desk as long as the patron is given a choice in the matter.<sup>13</sup> Perhaps more importantly, Rice also points out that a reference interaction does not differ fundamentally from an instructional interaction, given that librarians use many of the same communication and listening skills in each.<sup>14</sup>

Howell, Reeves, and Van Willigen conducted a survey that showed that patrons were more satisfied with reference service when instruction was present in some form.<sup>15</sup> They suggest that reference interactions might be more effective when librarians take on a more overt instructional role.<sup>16</sup> This is supported by the work of Michell and Harris, who use the term “inclusion” to describe the teaching dimension of reference work because the librarian “includes the patron in the reference process.”<sup>17</sup> Their survey of a sample of librarians and library patrons demonstrated that male and female librarians and male patrons rated the quality of reference service higher when the interactions were considered “high inclusion”—included some form of instruction.<sup>18</sup>

Furthermore, Schwartz emphasizes that “classroom instruction ultimately will be limited in value unless it is backed up with individual instruction at the reference desk.”<sup>19</sup> A 1991 survey by Witucke and Schumaker showed that 62 percent of responses to reference queries tend to include an “outline of strategy for finding the information needed.”<sup>20</sup> By Miller and Rettig’s logic, this would seem to indicate that a majority of academic reference librarians are hastening their own extinction.<sup>21</sup>

Consider that when a student approaches the reference desk, he or she may not have a coherent question to ask yet. As mentioned earlier, this vague “prefocus” state has been shown to be a natural part of information seeking.<sup>22</sup> Circumventing this process with a librarian-supplied “false focus” may facilitate finding answers but still leave the student adrift in their own thinking.<sup>23</sup> According to James Elmborg, “whenever we answer a student’s question without teaching the student how we answered it or why we answered it as we did, we are essentially taking the question away from the student, thereby creating a dependency in that student that undermines rather than strengthens the learning process.”<sup>24</sup>

Further complicating matters is the very real possibility that a student may still lack a focus even after relevant sources have been found. Indeed, in some cases, he or she may never actually find a focus.<sup>25</sup>

A great deal of the meaning-making that is integral to research and writing may happen long after the official reference transaction has ended. The real answers or synthesis may only crystallize when the student begins to read his or her sources, jot down notes, and scribble a preliminary draft. Instead of providing an answer in this situation, the librarian has offered encouragement and structure for the student’s own knowledge construction. One-on-one instructional interactions at the reference desk are the perfect points at which librarians can encourage students to stick with the uncertainties of this messy process by modeling something called “self-regulated learning.”

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## SELF-REGULATED LEARNING AND INFORMATION LITERACY

According to Pintrich and Zusho, “self-regulated learning is an active constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior in the service of these goals.”<sup>26</sup> Monitoring involves the metacognitive skill of paying attention to progress toward a chosen goal and generating mental feedback that is then used to control that progress.<sup>27</sup> According to Ohlsson, continually comparing one’s current progress toward a goal to an internal model provides feedback that enables one to fine-tune effort toward the goal.<sup>28</sup> Goals can range from learning a skill, such as C++ programming, to completing library research. In addition to monitoring progress toward goals, students also must use this self-generated feedback to regulate and control that progress, especially if there are frustrating obstacles or difficulties, such as a missing book.

The concept of self-regulated learning (SRL) is similar to the concept of “self-directed learning” that is mentioned in the “Information Literacy and Pedagogy” section of the ACRL Information Literacy Competency Standards.<sup>29</sup> A number of ACRL performance indicators and outcomes overlap with the SRL skills of goal setting, monitoring, regulation, and control. A few pertinent examples will highlight these overlapping skill sets.

Within Standard One (determining the nature and extent of the information needed), an information literate student is expected to:

- “Define a realistic overall plan and timeline to acquire the needed information.”<sup>30</sup> This is similar to the SRL step whereby learners set a goal for their learning. In this case, a student sets a goal for the type of information needed and maps out the steps of acquiring that information.

Within Standard Two (accessing needed information effectively and efficiently), an information-literate student:

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- “Assesses the quantity, quality, and relevance of the search results to determine whether alternative information retrieval systems or investigative methods should be utilized.”<sup>31</sup> This corresponds to the monitoring stage of SRL, wherein a student compares the information accessed to the information needed to reach the goal, and determines how closely they match.
- “Identifies gaps in the information retrieved and determines if the search strategy should be revised.”
- “Repeats the search using the revised strategy as necessary.”<sup>32</sup> These refer to students’ skills at regulating search behavior, based upon metacognitive feedback.
- “Extracts, records, and manages the information and its sources.”<sup>33</sup> This refers to controlling sources and information gathered.

Given these examples, it is apparent that there are salient similarities between students’ ability to regulate their own learning processes and their ability to engage in information literate behavior. Important examples of self-regulating practices within the research process that are directly correlated to information literacy skills include:

- realizing that the articles retrieved from an online database are not relevant enough;
- deciding to change one’s chosen keywords;
- choosing to do background reading;
- using controlled vocabulary terms when necessary; and
- persevering with the research process despite obstacles.

In each case, the student must monitor progress toward a goal (such as completion of the research) and use that feedback to modify his or her search strategies to more effectively attain that goal.<sup>34</sup>

If first-year undergraduates are as embryonic in their self-regulated learning as they are in their research skills, then it makes sense that, as Pintrich and Zusho state, they would need “to be ‘other-regulated’ initially through coaching, instructional supports, and teacher scaffolding.”<sup>35</sup> Pintrich and Zusho also make the very important point that self-regulation can be “privileged, encouraged, or discouraged by the contextual factors” surrounding learning.<sup>36</sup> Given that academic librarians are one of the contextual factors surrounding the undergraduate research process, a case can be made that librarians are ideally situated to provide this other regulation within the research process via one-on-one reference interactions.

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### SELF-REGULATED LEARNING AND THE REFERENCE TUTORIAL

The typical reference interaction can be considered as falling under a tutorial model in which students immersed in the research process seek out one-on-one librarian guidance in the same way they might go to faculty or teaching assistant office hours for help in solving a chemistry problem or debugging

a computer program. Merrill et al. define tutoring as “guided learning by doing,” a collaborative effort in which the tutor assists the student in identifying and recovering from errors, as well as confirming when the student has demonstrated a productive solution to a problem.<sup>37</sup> Graesser, Person, and Magliano emphasize the uniquely collaborative nature of the tutor and student interaction, noting that in the process of correcting student errors, “the tutor and student are jointly constructing a connected structure of ideas when the errors occur.”<sup>38</sup> According to Merrill et al., one of the essential advantages of individualized instruction is keeping students on “promising solution paths.”<sup>39</sup> This echoes Rettig’s assertion that the librarian should “bring the user as expeditiously as possible to the judgment junctures”; for example, the points where *only the user* can determine whether or not a fact or an information source is relevant.<sup>40</sup>

According to Nahl-Jacobovits and Jacobovits, students need assistance in breaking the research process up into steps, each with a specific motivation, that build upon each other to lead students toward the ultimate goal of completing the research project.<sup>41</sup> It is up to the librarian, as one of Pintrich and Zusho’s “contextual factors,” to provide this modular instruction, teaching students how to maintain the motivation that will keep them on track toward completing their research.<sup>42</sup> The reference librarian can mitigate student frustration and teach a more realistic view of the research process by mentioning (or even demonstrating) common errors as well as by providing strategies to correct those errors.<sup>43</sup>

Until a student develops this metacognitive ability to monitor his or her search activities and provide feedback to him or her self, the librarian can do this within the reference interaction. Reference librarians can, and frequently do, use such tutoring techniques as pumping, splicing, prompting, and summarizing to encourage students to verbally elaborate their search process.<sup>44</sup> When students have trouble recognizing successful searches or lists of relevant citations, librarians provide confirmation of these positive outcomes. This is the nature of tutor scaffolding in the context of the reference interaction; the scaffolding remains in place as the student practices self-regulated learning within the library. The true value of the instructional reference interaction is that it can, in the words of Kuhlthau, “offer intervention that matches the user’s actual level of information need.”<sup>45</sup>

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### LIMITS TO THE SELF-REGULATED LEARNING APPROACH

Needless to say, it is not realistic to expect that self-regulated learning can be incorporated into every interaction at the academic reference desk. As mentioned earlier, the librarian must pay attention to student verbal and nonverbal cues and feedback, including asking the student directly whether he or she desires this type of in-depth assistance.<sup>46</sup> Rettig breaks down patron reference needs into three main types: information extracted from an information source, instruction in the use of the source, and provision of the source itself.<sup>47</sup> It is up

to the librarian to figure out, at the moment of need, which of these the patron prefers.

One also should not discount the role of motivation as a factor in how effective instruction in self-regulated learning will be at the reference desk. Pintrich and Zusho found that student self-regulation was frequently tied to a feeling of connection to or personal investment in a task.<sup>48</sup> Narciss found that the benefits of informative tutoring feedback on student motivation and achievement were negligible if students were free to disengage from their tasks.<sup>49</sup> Given that undergraduate research frequently involves required assignments rather than self-directed exploration, it is likely that the motivation of the student will play a major factor in the efficacy of any reference instruction.

Finally, perhaps due to the ubiquity of Google and similar Internet search engines, today's undergraduates often settle for the first sources they retrieve in a search, whether in an online catalog, database, or search engine, regardless of the level of quality or relevance, rather than take the time and effort to refine keyword search strategies or read past the first page of retrievals. Both at the reference desk and in the classroom, this tendency toward settling for the most results for the least effort is extremely difficult to change.<sup>50</sup> Furthermore, Young and Von Seggern have noted that undergraduates in the Millennial generation (and even graduate students and faculty) are very conscious of the amount of time their research takes, leading them to cut corners whenever possible.<sup>51</sup> Carver and Scheier have discussed how tasks students have little desire to do become even more time-dependent as students seek to minimize the time spent completing them.<sup>52</sup> The reference librarian would do well to keep in mind this and other limits to undergraduate patience.

## CONCLUSION

All research to date suggests that, whether or not instruction is considered to be appropriate at the reference desk, it does take place. What has not been discussed at length in the literature is the form that this instruction takes. Even when reference librarians feel they are not overtly instructing, their interpersonal interactions with students indicate otherwise. This article argues that this librarian-supplied feedback and reinforcement is an essential part of the research process of undergraduates. Furthermore, the self-regulated learning context outlined here not only provides support for the tutorial aspect of reference service, but also ties it much more closely to classroom information literacy instruction.

Eadie has stated that "the problem with user education is that it provides the answer before the question has arisen."<sup>53</sup> On a related level, it may be contended that the question-answering approach to reference services frequently presumes to provide an answer before the student has had a chance to formulate the question(s). As Graesser, Person, and Magliano have stated, "the process of constructing a question is iteratively distributed over time."<sup>54</sup> Taylor further argues that "it is through [question] negotiation that an inquirer presumably resolves his

problem [and] begins to understand what he means."<sup>55</sup> Therefore, insofar as the reference interview is a collaborative process of clarifying and focusing student questions, it should be treated as an *educational process*.<sup>56</sup> By being more aware of their instructional role at the reference desk, librarians can, in turn, consciously tailor their feedback to students to more effectively encourage self-regulation, and hence information literacy.

## References and Notes

1. American Library Association Presidential Committee on Information Literacy, *Final Report*, 1989, [www.ala.org/ala/acrl/acrlpubs/whitepapers/presidential.htm](http://www.ala.org/ala/acrl/acrlpubs/whitepapers/presidential.htm) (accessed Sept. 5, 2006).
2. Association of College and Research Libraries, *Information Literacy Competency Standards for Higher Education*, 2000, [www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm](http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm) (accessed Apr. 19, 2006).
3. P. R. Pintrich and A. Zusho, "The Development of Academic Self-Regulation: The Role of Cognitive and Motivational Factors," in *Development of Achievement Motivation*, eds. A. Wigfield and J. Eccles (San Diego, Calif.: Academic Pr., 2002), 250.
4. Anita Schiller, "Reference Service: Instruction or Information," *Library Quarterly* 35 (Jan. 1965): 52–60.
5. *Ibid.*, 57. "The instructional aspect has persisted, diminishing the effectiveness of information service to the extent that it serves as a substitute for it, offering less service instead of more, and leaving the library clientele unsure of just what kind of service is being offered" (54).
6. *Ibid.*, 60.
7. Nicholas J. Belkin, "Anomalous State of Knowledge As a Basis for Information Retrieval," *The Canadian Journal of Information Science* 5 (May 1980): 133–43; Carol C. Kuhlthau, "Inside the Search Process: Information Seeking from the User's Perspective," *Journal of the American Society for Information Science* 42 (June 1991): 361–71; Carol C. Kuhlthau, "Developing a Model of the Library Search Process: Cognitive and Affective Aspects," *RQ* 28 (Winter 1988), 232–42.
8. William A. Katz, *Introduction to Reference Work* (New York: McGraw-Hill, 1997), 224.
9. Pauline Wilson, "Librarians As Teachers: The Study of an Organization Fiction," *Library Quarterly* 49 (Apr. 1979): 147.
10. Constance R. Miller and James R. Rettig, "Reference Obsolescence," *RQ* 25 (Fall 1985): 52–58.
11. Brian Nielsen, "Teacher or Intermediary: Alternative Professional Models in the Information Age," *College & Research Libraries* 43 (May 1982): 183–91.
12. Robert Wagers, "American Reference Theory and the Information Dogma," *Journal of Library History* 13 (Summer 1978): 279.
13. William A. Katz, *Introduction to Reference Work* (New York: McGraw-Hill, 2002); James Rettig, "A Theoretical Model and Definition of the Reference Process," *RQ* 18 (Fall 1978): 19–29; James Rice, "Library-Use Instruction with Individual Users: Should Instruction Be Included in the Reference Interview," *Reference Librarian* 10 (Spring/Summer 1984): 75–84.
14. Rice, "Library-Use Instruction with Individual Users."
15. Benita J. Howell, Edward B. Reeves, and John Van Willigen, "Fleeting Encounters —A Role Analysis of Reference Librarian-Patron Interaction," *RQ* 16 (Winter 1976): 124–29.
16. *Ibid.*
17. Gillian Michell and Roma M. Harris, "Evaluating the Reference Interview: Some Factors Influencing Patrons and Professionals," *RQ* 27 (Fall 1987): 96.
18. *Ibid.*
19. Vanette M. Schwartz, "The Reference Interview: Including Instruction?" *Illinois Libraries* 73 (Nov. 1991): 536.

## INFORMATION LITERACY AND INSTRUCTION

20. Virginia Witucke and C. J. Schumaker, "Analyzing Reference Activities: The Affordable Solution," *RQ* 31 (Fall 1991): 63.
21. Miller and Rettig, "Reference Obsolescence."
22. Belkin, "Anomalous State of Knowledge"; Kuhlthau, "Inside the Search Process"; Kuhlthau, "Developing a Model of the Library Search Process."
23. Lynn Kennedy, Charles Cole, and Susan Carter, "The False Focus in Online Searching: The Particular Case of Undergraduates Seeking Information for Course Assignments in the Humanities and Social Sciences," *Reference & User Services Quarterly* 38 (Spring 1999): 267–73.
24. James Elmborg, "Teaching at the Desk: Toward a Reference Pedagogy," *portal: Libraries and the Academy* 2 (July 2002): 459. Elmborg also argues very strongly for the teaching role of the reference desk by relating reference interactions to the one-on-one interactions that take place in writing conferences (for undergraduates). He makes particular reference to the following book: Muriel Harris, *Teaching One-to-One: The Writing Conference* (Urbana, Ill.: NCTE, 1986). On page 458 of his article, he quotes Harris: "The job of the writing teacher, and, I would argue, the reference librarian, 'is to encourage . . . exploration, to help students move through the process of discovery by talking with them, asking questions, and generally keeping up the momentum of exploration.'"
25. Kuhlthau, "Inside the Search Process."
26. Pintrich and Zusho, "The Development of Academic Self-Regulation," 250.
27. Deborah L. Butler and Philip H. Winne, "Feedback and Self-Regulated Learning: A Theoretical Synthesis," *Review of Educational Research* 65 (Fall 1995): 245–81.
28. Stellan Ohlsson, "Learning from Performance Errors," *Psychological Review* 103 (Apr.1996): 241–62.
29. Association of College and Research Libraries, *Information Literacy Competency Standards for Higher Education*.
30. *Ibid.*, 1.3.c.
31. *Ibid.*, 2.4.a.
32. *Ibid.*, 2.4.b-c.
33. *Ibid.*, 2.5.
34. Butler and Winne, "Feedback and Self-Regulated Learning."
35. Pintrich and Zusho, "The Development of Academic Self-Regulation," 258.
36. *Ibid.*, 279.
37. Douglas C. Merrill et al., "Tutoring: Guided Learning by Doing," *Cognition and Instruction* 13, no. 3 (1995): 340.
38. A. C. Graesser, N. K. Person, and J. P. Magliano, "Collaborative Dialogue Patterns in Naturalistic One-to-One Tutoring," *Applied Cognitive Psychology* 9 (Dec. 1995): 509.
39. Merrill et al., "Tutoring: Guided Learning by Doing," 353.
40. James Rettig, "Self-Determining Information Seekers," *RQ* 32 (Winter 1992): 161.
41. Diane Nahl-Jakobovits and Leon A. Jakobovits, "Learning Principles and the Library Environment," *Research Strategies* 8 (Spring 1990): 74–81.
42. Pintrich and Zusho, "The Development of Academic Self-Regulation," 279.
43. Nahl-Jakobovits and Jakobovits, "Learning Principles and the Library Environment."
44. Graesser et al., "Collaborative Dialogue Patterns." Pumping refers to the way in which a tutor, through head nods and affirmations, encourages a student to expand upon his or her answers. A tutor can also prompt a student with unfinished questions or incomplete statements to which the student supplies the missing word or phrase. Splicing occurs whenever an instructor gives a correction by verbally "splicing" the correct idea or concept into the student's proffered answer. Finally, the tutor can summarize a student's response, so that the student can evaluate its "rightness" or "wrongness," thereby practicing metacognition.
45. Kuhlthau, "Developing a Model of the Library Search Process," 241.
46. Marilyn Domas White, "The Dimensions of the Reference Interview," *RQ* 20 (Summer 1981): 373–81; Rice, "Library-Use Instruction with Individual Users," 75–84.
47. Rettig, "A Theoretical Model and Definition of the Reference Process."
48. Pintrich and Zusho, "The Development of Academic Self-Regulation," 250–84.
49. Susanne Narciss, "The Impact of Informative Tutoring Feedback and Self-Efficacy on Motivation and Achievement in Concept Learning," *Experimental Psychology* 51, no. 3 (2004): 214–28.
50. Thomas Mann, *Library Research Models: A Guide to Classification, Cataloging, and Computers* (New York: Oxford Univ. Pr., 1993). See all of chapter 8 "The Principle of Least Effort," 91–102, for a comprehensive discussion of this concept; George Kingsley Zipf, *Human Behavior and the Principle of Least Effort: An Introduction to Human Ecology* (Cambridge, Mass.: Addison-Wesley, 1949).
51. Nancy J. Young and Marilyn Von Seggern, "General Information Seeking in Changing Times: A Focus Group Study," *Reference & User Services Quarterly* 41 (Winter 2001): 159–69.
52. Charles S. Carver and Michael F. Scheier, "Origins and Functions of Positive and Negative Affect: A Control-Process View," *Psychological Review* 97 (Jan.1990): 19–35.
53. Tom Eadie, "Immodest Proposals: User Instruction for Students Does Not Work," *Library Journal* 115 (Oct. 15, 1990): 45.
54. Graesser et al., "Collaborative Dialogue Patterns," 506.
55. Robert S. Taylor, "Question Negotiation and Information Seeking in Libraries," *College & Research Libraries* 29 (May 1968): 194.
56. Jeffrey Pomerantz, "Collaboration As the Norm in Reference Work," *Reference & User Services Quarterly* 46 (Fall 2006): 45–55.