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Valuing Information Literacy: Affective Learning and the ACRL Standards

Robert Schroeder
Portland State University, schroedr@pdx.edu

Ellysa Stern Cahoy
Penn State University

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abstract: Higher education information literacy standards have readily addressed cognitive skills, although affective competencies—the emotional abilities that students must acquire in order to successfully navigate the research process—have not yet been incorporated into standards. This paper presents examples of current information literacy standards, integrating affective competencies or dispositions, including the American Association of School Librarians (AASL) *21st Century Learning Standards*, and proposes a model for affective-focused higher education information literacy standards. The role of affect in library learning, the importance of affective competencies, and the centrality of affective learning to student mastery of research skills are discussed. Viewing information literacy as an integrated literacy, encompassing affective learning, technological literacy, and critical thinking, can provide avenues for greater collaboration with faculty in support of effective student research assignments.

Introduction

The ACRL *Information Literacy Competency Standards for Higher Education* (ACRL standards) have been part of librarians' and educators' lives since their adoption by the board of directors of the ACRL in January 2000.[1] That is not to say that the ACRL standards have met with unqualified and unanimous acceptance. Even before the formal adoption of the ACRL standards, the term information literacy was being debated in the literature.[2] Although terminology and semantics were often part of the debate, the change in terminology from *bibliographic instruction* to *information literacy* was often seen as symptomatic of larger theoretical issues. These issues involved the growing acceptance that information literacy was becoming increasingly embedded in the curriculum and that academic librarians' relationships with other faculty were changing. Debates over ACRL standards and information literacy have slowed,[3] and there is greater consensus on both traditional and current definitions of information literacy.[4]

The authors of this paper agree that the ACRL standards are a good and tried model of *cognitive* goals for students in academic institutions, but it is time to look at including goals from another realm of education, the *affective* realm. As Ellysa Stern Cahoy states in her article, "Put Some Feeling into It! Integrating Affective Competencies into K–20 Information Literacy Standards,"

> For the most part, our information literary standards for both K–12 and college audiences do not address the development of confidence building affective skills. Without the inclusion of affective competencies, the standards promote a vision of information literacy that ignores the anxieties and difficulties of the research process and the impact of emotion on student effectiveness. To be information literate, a student must acquire and achieve competency in cognitive, behavioral and affective information seeking skills.[5]

What is the realm of affect, and how does it relate to education? In this paper, the authors will briefly explain the nature of affect in the library and will show that many librarians are already acknowledging and teaching to affective goals in their information literacy sessions. We will also propose a model of what affective information literacy standards might look like and give examples of how librarians could easily incorporate affective goals into their teaching and assessment.

The Affective Domain

Affect is defined as "(1): feeling, affection (2): the conscious subjective aspect of an emotion considered apart from bodily change."[6] Even in this basic dictionary definition, affect is seen as separate from the body. As Leon Jakobovits and Diane Nahl-Jakobovits point out, the division of the human being into separate domains can be traced back to early Greek and Jewish ideas that a person is comprised of separate parts—the body, the mind, and the soul. Later philosophers, like Emanuel Swedenborg, reaffirmed these divisions when they spoke of actions, understanding, and will. Schools of modern psychology continue to use this threefold schema when they choose to view human beings primarily from one of these three areas. They are exemplified by behaviorism, cognitive psychology, and dynamic psychology.[7]

By the 1950s, educators began codifying educational objectives along these tripartite divisions. Benjamin Bloom and others published in 1956, what was meant to be, the first in a series of three handbooks—*Taxonomy of Educational Objectives: The Classification of Educational Goals by a Committee of College and University Examiners—Handbook I: Cognitive Domain*. Bloom states, "What we are classifying is the <u>intended behavior</u> of students— the ways in which individuals are to act, think, or feel as the result of participating in some unit of instruction."[8] The second handbook in the series by David R. Krathwohl, Benjamin S. Bloom, and Betram B. Masia, *Taxonomy of Educational Objectives, the Classification of Educational Goals. Handbook II: Affective Domain*, was published in 1964.[9]

Educational objectives for the affective domain were initially hard to codify. By its very nature, the realm of affect is more ambiguous, less logical, and less clearly defined than the cognitive domain. Some terms that commonly have been used in conjunction with the affective domain are listed in table 1.[10]

Table 1.

Terms associated with the concept of affect by various authors [see note 10]

Attitudes	Attitudes	Attitudes
Interests	Beliefs	Beliefs
Sentiments	Interests	Emotions
Values	Openness	Perceptions
	Needs	Psychosocial responses or behaviors
	Opinions	Sensations
	Personal temperament	Values
	Social temperament	
	Values	
Jum C.Nunally	Ralph Hoepfner	William J. Gephart

Activities	Attitudes	Appreciations
Assumptions	Attitudes about self	Biases
Attitudes	Attributions	Degree of acceptance or rejection
Beliefs and convictions	Continuing motivation	Emotion
Feelings	Emotions	Emotional sets
Goals or purposes	Feelings	Feeling tone
Interests	Interest	Interests
Worries, problems, obstacles	Morals and ethics	Values
	Self development	
	Social competence	
	Values	
Louis Edward Raths	Barbara L. Martin	David Krathwohl

From these sources, we have formulated a working definition of the affective domain: *The affective domain comprises a person's attitudes, emotions, interests, motivation, self-efficacy, and values.* Krathwohl, Bloom, and Masia wrestled with these slippery affective terms, looking for a taxonomy or schema that would relate all of these disparate terms to each other. They hit upon the psychological concept of *internalization* as an organizing principle. As Krathwohl, Bloom, and Masia describe it:

> This ordering of the components seemed to describe a process by which a phenomenon or value passed from a level of bare awareness to a position of some power to guide or

control the behavior of a person. If it passes through all the stages in which it played an increasingly important role in a person's life, it would come to dominate and control certain aspects of that life as it was absorbed more and more into the internal controlling structure. This process or continuum seemed best described by a term which was heard at various times in our discussions and which has been used similarly in the literature: "internalization." This word seemed an apt description of the process by which the phenomenon or value successively and pervasively becomes a part of the individual.[11]

Krathwohl, Bloom, and Masia described five main categories along the affective continuum—receiving, responding, valuing, organizing, and characterizing by a value complex.[12] As an affective objective moves up this continuum, it is more thoroughly internalized by the individual. The Affective Domain Taxonomy, which is based on the principle of internalization, is detailed in table 2.[13]

Even with explicit terminology provided by many researchers and the taxonomy of the affective domain developed by Krathwohl, Bloom, and Masia, much less has been written about educational objectives in this realm than the cognitive domain. The reasons for this are complex and interconnected. Walter Pierce and Charles Gray note that

an examination of school statements of philosophy or departmental or course objectives reveals an apparent concern about learning and behavior in the affective domain. However, once one begins to probe for the meanings and implications of the statements of philosophy and intent, problems emerge. First, there often seems to be considerable ambiguity (and little agreement) as to what is meant by affective learning. Second, actual classroom practice often appears to have only a minimal relationship to stated affective objectives. And third, there is considerable confusion and inconsistency regarding the types of teaching strategies (and content) that might be appropriate for promoting affective learning.[14]

Barbara Martin and Leslie Briggs confirm that attempting to create affective educational objectives is not as easy as creating cognitive ones—they are much harder to conceptualize, specify, operationalize, and measure.[15] They add that there are also larger philosophical reasons that many educators give for not entering into the affective domain in their classrooms. Because affective goals seem long range and intangible, they are often not seen to be measurable over short time frames. Many educators are not comfortable with methods like classical or operant conditioning that are used to change attitudes, and some are also concerned that a discussion of values and attitudes could be seen as indoctrination.[16] Martin and Briggs also caution that, although there are advantages to conceptualizing the three domains as discrete when researching and discussing educational objectives, "that in actuality, that is in teaching and real-life learning situations, no true separation of cognitive, affective and psychomotor states…[is] possible."[17]

Within higher education, the emphasis remains on exploring the cognitive domain, but the role that affect plays in higher education and in student leaning continues to be studied in spite of challenges inherent in the affective domain noted above. A search of the term *affective learning* in ERIC pulls up scores of recent articles relating to affective learning goals across disciplines as diverse as art, environmental studies, athletics, and language. There are also continued calls for increasing the role of affective goals in education. Although student teachers in the United States regularly study the affective domain and its importance to student learning, because of "the intense focus on

Table 2.
Krathwohl, Bloom, and Masia's Affective Domain Taxonomy

1.0 Receiving (attending)	4.0 Organization
1.1 Awareness	4.1 Conceptualization of a value
1.2 Willingness to receive	4.2 Organization of a value system
1.3 Controlled or selected attention	
	5.0 Characterization by a value of value complex
2.0 Responding	5.1 Generalized set
2.1 Acquiescence in responding	5.2 Characterization
2.2 Willingness to respond	
2.3 Satisfaction in response	
3.0 Valuing	
3.1 Acceptance of a value	
3.2 Preference for a value	
3.3 Commitment (conviction)	

the acquisition of minimum levels of academic skills…" in American schools today, "many student teachers did not find the time to teach affective skills."[18] An article from *The British Education Research Journal* in 2007 entitled "Acknowledging the Affective in Higher Education" reports on the large role emotion and affect play in college students' first-year experience and the general lack of research in these areas.[19] Affect plays a large role in college students' relationship to libraries and the research process.

> **Affect plays a large role in college students' relationship to libraries and the research process.**

Affect and the Library

Affect has been noted and studied in the area of librarianship for over 25 years. Dale Vidmar sums up the importance of affect for librarians when he states, "The affective domain is an important aspect of the instructional process in that it addresses the students' motivation, their involvement in the learning process, their experience of self-actualization and discovery, and their feelings in context of the library environment."[20] Whereas many librarians have avoided engaging with such a nebulous and unwieldy topic as the affective domain, some have tackled this concept. Foremost among them is Carol Kuhlthau. She bases her research in the educational theory of constructivism advocated by Jerome Brunner, George Kelly, John Dewey, as well as other theorists such as Jean Piaget, William James, and Lev Vygotsky.[21] She states:

> The constructivist view of learning, which offers insight into what the user experiences, is a particularly valuable way to understand information seeking from the user's

perspective. Two basic themes run through the theory of construction, one is that we construct our own unique personal worlds, and the other is that construction involves the total person incorporating thinking, feeling, and acting in a dynamic process of learning.[22]

Combining ideas of user anxiety and uncertainty with constructivist theory, Kuhlthau developed the model of the Information Search Process (ISP). She discovered that, "Affective experience plays a significant role in directing cognition and action throughout the process of construction."[23] In relation to affect, one major finding from Kuhlthau's research studies is that users generally experience strong, similar, and often negative emotions as they progress through the stages of the research process. She states in *Feelings in the Library Research Process*:

> In the process of doing library research, most people commonly experience certain feelings. Uncertainty, confidence, interest, concern, apprehension, impatience, curiosity, satisfaction and numerous other feelings all play a part in the research process. Feelings, however, are rarely considered when students are learning to use libraries.[24]

Working at about the same time as Kuhlthau in the mid-1980s, Constance Mellon began to develop the theory of library anxiety. Trying to discover how first-year composition students felt while engaged in library research, she performed a qualitative research study based on their reflective writings. When she looked for common themes in the student writings related to the library and to research, she found that about 80 percent of students reported fear as an initial response to the library.[25] She found that "students' fears were due to a feeling that other students were competent at library use while they alone were incompetent, that this lack of competence was somehow shameful and must be kept hidden and that asking questions would lead to a revelation of their incompetence."[26] Mellon also found that "four reasons for feeling lost emerged: the size of the library; not knowing where things were; not knowing what to do; and not knowing how to begin the research process."[27] Seeing similarities between her students performing research and the research on math anxiety or test anxiety, she called this new phenomenon *library anxiety*.

Based on Mellon's qualitative work, Sharon L. Bostick developed the Library Anxiety Scale to quantitatively measure library anxiety. This scale measures five major factors of library anxiety—barriers with staff, affective barriers, comfort with the library, knowledge of the library, and mechanical barriers.[28] Anthony Onwuegbuzie, Qun G. Jiao, and Sharon Bostick have furthered research in this area.[29]

Diane Nahl continues to explore the impact that affect has on library users, as well as the interactions between cognitive and affective skills. She is particularly noted for her research in human computer interaction and affect's role in online searching and Internet use. Her research highlights the effects of computer anxiety within the library setting, where librarians and library users are continually more dependent on technology. Nahl notes:

> Formerly, it was expected that information specialists would supply the cognitive elements users need, while the users themselves would supply their own affective elements such as sufficient motivation, positive attitude, and effective coping skills.

The nature of affective skills needed in the electronic information environment is revealed in the affective reactions to the cognitive elements. In the user's cognitive world, uncertainty increases with growing complexity. Many users lack motivation for becoming technologically literate and develop an aversion to it. The necessity thrust upon designers and managers of information environments is to understand how cognitive and affective skills of users coordinate with each other or inhibit each other in information environments. Research has shown that acquiring information is an interactive affective-cognitive skill where the motivation to learn is the affective component and the knowledge itself is the cognitive component.[30]

Nahl studied information users and applied affective load theory (uncertainty and technophobia) to their behavior. Her findings indicate that higher affective coping skills, such as optimism and self-efficacy, work together with cognitive skills to increase user success.[31] She recently edited, with Dania Bilal, *Information and Emotion: The Emergent Affective Paradigm in Information Behavior Research and Theory*. This key work is of great interest to researchers of affect in libraries. In particular, Lesley S. J. Farmer's chapter in Nahl and Bilal's book, "Developmental Social-Emotional Behavior and Information Literacy," explores the important connection between digital literacies and affective behaviors. Farmer advocates that "direct instruction in social and emotional behaviors" could "constitute a significant part of the information literacy curriculum."[32]

But will technophobia or computer anxiety continue to be issues in the library as new students increasingly are, in Marc Prensky's term, "Digital Natives"?[33] Although it is true that many more students are technologically adept, there is still a sizable minority of young people in this new generation who have not mastered computers skills. A recent review of evidence around the "Digital Native" debate concludes:

> We have examined the key assumptions underlying the claim that the generation of young people born between 1980 and 1994 are "natives." It is apparent that there is scant evidence to support this idea, and that emerging research challenges notions of a homogenous generation with technical expertise and a distinctive learning style. Instead, it suggests variations and differences within this population, which may be more significant to educators than similarities.[34]

Computer anxiety still exists even in the portion of "Digital Natives" who feel confident in their own computer skills. A recent study of first-term psychology students at the University of Amsterdam found that, "contrary to the lay expectations, computer anxiety is present among educated, young and experienced computer users."[35]

Understanding the Information Literacy Standards

This is a time of change for information literacy standards throughout all levels of education. Information literacy was previously centered almost solely on cognitive skill. Today it is morphing from an individually focused, competency-based agenda into one that is socio-cultural, encompassing the entire learning community and resting on collective intelligence.[36]

College Learning for the New Global Century, a report from the Association of American Colleges and Universities, highlights information literacy as an "essential learning outcome for the 21st century."[37] Categorized as an intellectual and practical skill, the

report notes that it should be practiced extensively across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance.

The Educause/New Media Consortium *2008 Horizon Report* also addressed the global importance of information literacy, stating that visual, technological, and information literacy retain continued (and perhaps redefined) importance. "We need new and expanded definitions of these literacies that are based on mastering underlying concepts rather than on specialized skill sets, and we need to develop and establish methods for teaching and evaluating these critical literacies at all levels of education."[38]

Three sets of standards relevant to information literacy currently exist. Two were recently published and embrace a new model of framing information-seeking skills within the wider lens of education in general. The American Association of School Librarians (AASL) document, *Standards for the 21st Century Learner*, debuted in October 2007. It updated the 1998 *Information Literacy Standards for Student Learning* by AASL and the Association for Educational Communications and Technology (AECT), which was published simultaneously as an independent document and as chapter 2 of *Information Power: Building Partnerships for Learning*.[39]

The International Society for Technology in Education (ISTE) released *National Educational Technology Standards for Students* in June 2007.[40] Although primarily technology focused, these standards also contain information literacy components. The Association of College and Research Libraries (ACRL) produced the *Information Literacy Competency Standards for Higher Education* in 2000. When compared, each set of standards communicates a slightly different vision of what information literacy is and how it is integrated and influential in the student learning experience.

The AASL Standards

Viewed as a continuum, the 1998 and 2007 AASL K–12 standards present an interesting portrait of the rapidly changing definition of information literacy. The *Information Literacy Standards for Student Learning* were comprehensive, addressing the appreciation "of literature and other creative expressions of information" and the development of the student as an independent learner and a socially responsible person who "contributes positively to the learning community and to society" ethically, democratically, and within groups of diverse individuals.[41] The new *Standards for the 21st Century Learner* presents an updated focus, noting that

> the definition of information literacy has become more complex as resources and technologies have changed. Information literacy has progressed from the simple definition of using reference resources to find information. Multiple literacies, including digital, visual, textual, and technological, have now joined information literacy as crucial skills for this century.[42]

The new AASL standards speak to collaborative work, social networking, critical thinking, and creativity in learning how to use information and generate content—all abilities that are increasingly important in our information and content-creation rich online environment. The new standards also incorporate affective "dispositions in action"—"ongoing beliefs and attitudes that guide thinking and intellectual behavior that can be measured through actions taken."[43]

The Standards for the 21st Century Learner defines nine foundational common beliefs that emphasize inquiry, use of technology, the changing face of information literacy, and the social context of learning. They acknowledge that school library media programs must address multiple literacies.[44] Additional program guidelines and assessment examples for the new standards were published in a subsequent publication in 2009, *Standards for the 21st Century Learner in Action.*[45]

The ACRL Standards

In 1998, the ACRL created the Information Literacy Competency Standards Task Force, charged with developing standards for higher education that recognized "the role of critical thinking in the learning process."[46] The task force included representatives from the American Association of Higher Education (AAHE) and from two accreditation organizations, the Middle States Association's Commission on Higher Education (MSACHE) and the Association for Library and Information Science Education (ALISE). This collaborative crafted the standards, performance indicators, and learning outcomes that became the *Information Literacy Standards for Higher Education*.

Unlike the recent AASL and NETS standards, the ACRL standards are highly cognitive, focusing intently on the competencies relevant to finding and using information effectively and ethically. The ACRL standards were developed as a work in progress, a document to be revisited and revised as needed. Noting the diverse focus of the ACRL standards, Patricia Iannuzzi, chair of the Standards Task Force stated, "The task force paid particular attention to various types of learners, at all levels, and with varied skills. We also developed the standards with the expectation that they would be customized for the specific environment."[47] The ACRL standards were crafted as a continuum of the 1998 AASL/AECT standards. The original ACRL standards document states:

> *Information Literacy Competency Standards for Higher Education* provides a framework for assessing the information literate individual. It also extends the work of the American Association of School Librarians Task Force on Information Literacy Standards, thereby providing higher education an opportunity to articulate its information literacy competencies with those of K–12 so that a continuum of expectations develops for students at all levels.[48]

With the new AASL K–12 standards embracing an updated concept of information literacy competencies, ACRL is presented with the opportunity of crafting standards that reflect and build on the vision of these updated documents.

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Is "Finding" the Issue Anymore? Affective Information Literacy Standards

Incorporating affective competencies or dispositions into information literacy standards brings a needed emphasis on the affective aspects of student learning.[49] With the introduction of affective dispositions in the AASL standards, a new model has been broached, but it is accompanied by teacher/administrator anxiety over assessment. Rosalind Picard et al. note: "One of the reasons understanding about affect has lagged behind that of cognition is that affective state information is hard to measure. You can easily measure someone's ability to recall a list of learned items, and with somewhat more difficulty, you can test their ability to generalize and apply some learned information. However, it is much harder to measure how they feel while doing these things."[50]

This concern is valid, yet it does not present a compelling reason to disregard affective competencies. Affective behaviors are harder to measure and assess; but, together with cognitive skills, they present a holistic picture of student acquisition and mastery of the information process. Affective skills must be present in information literacy standards in order to reinforce for librarians and educators the importance of acknowledging and addressing students' feelings and affective behaviors.

The *dispositions in action* in the new AASL standards center on appropriate, attainable affective behaviors for K–12 students. The dispositions are a "strand" beneath the four primary standards and exist alongside skills, responsibilities, and self-assessment strategies. The AASL document describes these dispositions as "the learning behaviors, attitudes and habits of mind that transform a learner from one who is able to learn to one who actually *does* learn."[51] The document notes that students can acquire dispositions in action through assignments that "require persistence, flexibility, divergent thinking or any other learning behavior."[52] Examples of dispositions in action are presented in table 3 (words denoting affective concepts are italicized by the authors).

In "Dispositions: Getting Beyond Whatever," Barbara Stripling examines the critical importance of the AASL dispositions in action. Developed dispositions, also known as habits of mind, are essential to student success.[53] Stripling identifies a study by researcher David Conley in which specific habits of mind were deemed more important by university faculty than cognitive skills as predictors for academic success.[54] Stripling notes that, in teaching dispositions, they "are not observable until learners display behavior that expresses the underlying attitude."[55] This speaks to Krathwohl's concept of internalization. In general, the AASL dispositions in action provide a valuable model for other information literacy-related standards for integrating affective behaviors (or habits of mind) relevant to specific learning standards.

> Adding affective outcomes would humanize the ACRL standards, reminding academic librarians and educators of the positive feelings that they must continually strive to develop in their students.

The ACRL standards focus entirely on cognitive and behavioral abilities that require "individuals to recognize when information is needed and [to] have the ability to locate, evaluate and use effectively the needed information."[56] Unlike the more conceptual

Table 3.
Examples of "dispositions in action" from the AASL Standards

Standard One: Inquire, think critically and gain knowledge

    1.2.1 Display *initiative* and *engagement* by posing questions and investigating the answers beyond the collection of superficial facts.

Standard Two: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge

    2.2.1 Demonstrate *flexibility* in the use of resources by adapting information strategies to each specific resource and by seeking additional resources when clear conclusions cannot be drawn.

Standard Three: Share knowledge, and participate ethically and productively as members of our democratic society.

    3.2.1. Demonstrate leadership and *confidence* by presenting ideas to others in both formal and informal settings.

Standard Four: Pursue personal and aesthetic growth.

    4.2.1 Display *curiosity* by pursuing interests through multiple resources.

AASL document, the ACRL standards include detailed behavioral outcomes that relate specifically to the use of different technologies and types of resources, reflecting the practical task of accessing and using information in an academic library. Adding affective outcomes would humanize the ACRL standards, reminding academic librarians and educators of the positive feelings that they must continually strive to develop in their students.

A Model for Affective Information Literacy Standards

In order to be information literate, a student must master the cognitive skills and abilities embodied in the ACRL information literacy standards. Cognition does not stand alone, however. An example of the role that dispositions and values play in supporting cognitive goals is afforded by an outcome closely related to information literacy—critical thinking (CT). From 1988 to 1989, a Delphi study was conducted with a panel of philosophers, educators, and social scientists to better understand what makes up critical thinking. In their report published in 1990, *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction*, they recognized 19 *affective dispositions of critical thinking*. Among these dispositions were eight that especially map to information literacy. In the selection below, if the reader replaces "CT" with "information literacy" and "reasoned inquiry" with "research," the relationship becomes particularly clear (note: the affective terms are italicized):

Affective Dispositions of Critical Thinking (CT)

- *inquisitiveness* with regard to a wide range of issues
- *concern* to become and remain generally well-informed
- *alertness* to opportunities to use CT
- *trust* in the process of reasoned inquiry
- *flexibility* in considering alternatives and opinions
- *willingness* to reconsider and revise views where honest reflection suggests that change is warranted
- *diligence* in seeking relevant information
- *persistence* though difficulties are encountered[57]

In their article "Managing the Affective Micro-Information Environment," Nahl-Jakobovits and Jakobovits reiterate the symbiosis between cognition and affect. They state: "When cognitive skills are taught, they can be made use of only if the appropriate affective skills are actively present. Willingness, motivation, perseverance, and appropriate values constitute prerequisites for rendering effective and operative the cognitive skills we endeavor to teach in bibliographic instruction."[58]

Any new standard dealing with the affective side of information literacy should perhaps naturally conform to the hierarchical model (Standard, Performance Indicators, and Outcomes) already developed in the ACRL standards, but it should also incorporate the findings and theories of researchers in the affective learning areas, such as Kuhlthau and Krathwohl, Bloom, and Masia noted above. The overarching organizing principle Krathwohl, Bloom, and Masia discovered for learning in the affective realm was *internalization.* To that end, an affective standard with appropriate outcomes should be organized around the principle of internalization, and a student's progress in internalizing the outcomes—from initially only being aware of a concept to ultimately incorporating it into his or her value system—should be evident. An example of such a standard is as follows:

Standard 6

The information literate student understands and effectively deals with the personal and emotional aspects of the research process, and is favorably disposed to and values the research process.

Performance Indicators:

1. The information literate student understands emotional states associated with stages in the research process.

   Outcomes include:
   a. Identifies stages in the research process and emotional states commonly associated with them
   b. Recognizes his/her own emotions at various stages in the research process
   c. Articulates his/her emotional responses to research

2. The information literate student effectively copes with the emotional side of the research process.

Outcomes include:
   a. Displays resilience and persistence by continuing to research despite challenges (lack of results, information glut, ambiguity, and so forth)
   b. Demonstrates flexibility and adaptability throughout the research process
   c. Demonstrates increased confidence in his/her research and information literacy skills

3. The information literate student values the research process.

Outcomes include:
   a. Demonstrates curiosity, self motivation, and self directed inquiry
   b. Incorporates information literacy skills and values into his/ her own value system

The proposed standard 6 above is written to conform to the general schema and levels of Krathwohl, Bloom, and Masia's Affective Domain Taxonomy. Performance indicator 1 is written to level 1.0, "receiving." Students at this level are aware of the various emotional states they are experiencing and how they relate to the various information-related tasks they are performing. Their attention to these states is an entré for librarians to introduce the concepts of library anxiety or Kuhlthau's ISP model to the students. This foundation is the basis for the other two performance indicators.

Performance indicator 2 is written to the level 2.0, "responding." Students at this level begin to develop coping skills, which help overcome the negative emotions and attitudes that they became aware of at level 1.0. If they persevere, they will become resilient researchers.

Performance indicator 3 above is written to the level 3.0, "valuing." At this level, students show a preference for conducting research when presented with an information problem.

Affective Learning Outcomes and Library Instruction

What would a new information literacy standard mean for librarians? Would it mean that more instruction would be necessary or that radical changes in library instruction would need to be made? Perhaps, but the authors think not. Much of what instruction librarians already do in library sessions is meant to alleviate students' library anxiety. Many of the topics already covered in library sessions, ostensibly aimed at developing the existing cognitive information literacy standards, address some of the components of library anxiety noted by Mellon and Bostick. Orientations to the physical library attempt to deal with the anxiety caused by the size of the library and to make students more comfortable in the library. Much of our instruction already deals with the concept of where to begin a research project, what to do as research progresses, and how to locate materials in the library—all noted by Mellon and Bostick as major components of library anxiety.

> **Much of what instruction librarians already do in library sessions is meant to alleviate students' library anxiety.**

In many cases, instruction librarians do not yet *consciously* design their classes to include affective goals, but they do they attempt to assess whether affective goals are

being met. Having affect explicitly recognized at the level of a standard would give librarians who are currently dealing with affect in the classroom, as well as those that do not yet deal with it, a model to help inform practice. Just as the initial five ACRL standards sparked discussion in the library profession around cognitive goals, a new standard would allow librarians to carry on the same rich discussion around affective goals. The framework could also catalyze further research and the development of best practices as well.

Having a performance indicator such as number one above, which states that students will understand the personal and emotional side of the research process, would allow us to incorporate Kuhlthau's Information Seeking Process model into library instruction. This would help academic librarians bring students' feelings about the library and research out into the open. The very fact that students' feelings would be validated should make for more effective instruction sessions.

In 1985, Kuhlthau noted that "feelings are a natural part of the library research process. When students recognize the sequence of feelings they experience in their own research and are able to apply strategies to work through the stages, they are prepared to use a library collection with independence and confidence."[59] Since then, there have been some librarians doing research in teaching to affective outcomes. Their research sheds light on ways other instruction librarians could effectively integrate affective learning outcomes into research sessions.

Jacqueline Kracker was interested in discovering how students would be affected if they were exposed to an overview of Kuhlthau's ISP model prior to doing their research. She surveyed groups of upper-level undergraduate students who had research assignments. Some students were exposed to the ISP model during a 30-minute talk and some were not. She measured their anxiety around doing research and found that the students who had been exposed to the ISP model were less anxious about their research assignment than the group who had not been exposed to it.[60]

In her article, "Attitudes: The Forgotten Dimension in Library Instruction," Mellon states, "The emotional attitudes that students bring to the learning situation strongly affect what and how much will be learned."[61] Dale Vidmar took this message to heart in the research he performed in 1998. He wanted to understand if having a 10–20 minute presession with students would affect students' attitudes about the library and academic research. He administered the presession to three sections of freshman composition students and used three other sections as a control group. He found that

> a pre-session may provide an opportunity for librarians to listen to their students to discover what they need to know and to prepare the foundation of a second instructional session. The results of this study indicated pre-session students generally were better prepared for instruction and thus more likely to feel the instruction was relevant to their individual needs. In addition students given a pre-session prior to library instruction had a sense that the library was a friendlier environment and that finding information was easier.[62]

Both of these examples involve additional time outside of the usual 50-minute session. The authors wonder if other options might exist that would allow for at least some of the same positive affective outcomes to be achieved. Could some of the goals,

a short presession, or the inclusion of some description of applicable stages of the ISP process be woven into the context of the regular session?

Research has also indicated that online or hybrid delivery of instruction can be just as effective as face-to-face delivery.[63] If this is possible with cognitive information literacy outcomes, could an online or hybrid module dealing with affective outcomes be designed that would be just as effective? In this way, some of the affective learning could take place prior to or after the face-to-face class as a supplement. Some research along these lines was conducted at the Bailey Library of Slippery Rock University in 2006 and 2007. The research team measured library anxiety levels in freshmen to determine the most effective instructional method for easing library anxiety.[64] Different groups of students were given library instruction via one of three modes—one-on-one instruction with a librarian, in a class session, or via an online tutorial. The students' library anxiety was measured using Bostick's Library Anxiety Scale. All three methods resulted in lowered student library anxiety, with the online option being the strongest option in 2006 and the second strongest in 2007.[65]

Affective Learning Outcomes Assessment

As mentioned, assessment of affective outcomes can be challenging, and this challenge often is the very reason instructors and librarians may initially choose not to teach to affective goals. Lowell Hedges and Valija Axelrod, in their handbook *Assessing Learning*, clearly articulate this challenge:

> We can only infer that people have attitudes, values, and appreciations by their actions and words. In essence, we measure these behaviors indirectly by inference, since they are not observable in themselves. Thus, we look for behavior that would indicate the existence of the attitude, value, or appreciation as defined in the student performance objective.[66]

Behaviors can be measured via direct observation, but observation studies can be time consuming, and often the desired student behaviors take place outside of the 50-minute library session. If time allows, observation may be optimal; but, as in any successful and sustainable assessment program, one should focus on just a few outcomes and performance indicators. In library instruction sessions that include hands-on individual searching by students, a few observations could be made to get a handle on the students' confidence or frustration level with new skills and concepts. Computer logs could also be analyzed to see if students were choosing to search in recommended academic databases, which could indicate they were at least at the level of receiving or attending, if not valuing, this choice.

Having students self-report data might be a more effective way to assess many affective outcomes.

Having students self-report data might be a more effective way to assess many affective outcomes. Questionnaires, surveys, or student research logs could be developed relatively easily to reveal students' feelings, frustrations, and confidence levels with using the library, library resources, or databases. As

with all self-reported data, the trade off for the ease of collection is that one has to have faith that the data are reliable. Subjects may answer the way that they think instructors or librarians want them to answer or may feel their responses could affect their grades in some way. Whichever way affective outcomes are analyzed, whether by observing behavior or via self-reported data, it must be remembered that choice, not behavior, is the key issue. In "A Checklist for Designing Instruction in the Affective Domain," Barbara Martin states, "The two central criteria then for writing behavior statements for affective objectives are: (1) state the behavior as a voluntary one, and (2) use the principle of internalization to indicate different levels of the behavior."[67]

Conclusion

With the revision of the AASL standards, revision of the ACRL information literacy competencies appears likely within the next few years. Students and educators in higher education are encountering a changing digital landscape. Like the AASL standards, it is hoped that the new ACRL standards document will not only address and incorporate affective behaviors and dispositions but also new media literacies as well. The AASL standards present an opportunity for ACRL to look at the continuum of learning and base the higher education standards on a sequential progression of the skills outlined in the *AASL 21st Century Learner* standards.

The *2009 Horizon Report*, produced by Educause and the New Media Consortium, highlighted "a growing need for formal instruction in key new skills, including information literacy, visual literacy, and technological literacy," as the top critical challenge in the near future.[68] The report continues, "The skills involved in writing and research have changed from those required even a few years ago. Students need to be technologically adept, to be able to collaborate with peers all over the world, to understand basic content and media design, and to understand the relationship between apparent function and underlying code in the applications they use daily."[69]

Accordingly, the time is ripe to chart a new course for information literacy that will highlight technology skills and new media collaboration, as well as integrate critical affective dispositions, including the ability to effectively collaborate with others. By viewing information literacy as an integrated literacy, with internalized dispositional affects and intertwined with technological, visual, textual, and other literacies, more opportunities will be provided for enhanced curriculum integration and greater collaborative work with faculty, technologists, and others involved in learning design.

Robert Schroeder is reference and instruction librarian and coordinator of information literacy, Millar Library, Portland State University, Portland, OR; he can be contacted via e-mail at: schroedr@pdx.edu.

Ellysa Stern Cahoy is assistant head of library learning services, Penn State University Libraries, University Park, PA; she can be contacted via e-mail at: ellysa@psu.edu.

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