EMBEDDING AFFECTIVE LEARNING OUTCOMES IN LIBRARY INSTRUCTION

Ellysa Stern Cahoy
Pennsylvania State University

Robert Schroeder
Portland State University

ABSTRACT

While information literacy in higher education has long been focused on cognitive learning outcomes, attention must be paid to students' affective, emotional needs throughout the research process. This article identifies models for embedding affective learning outcomes within information literacy instruction, and provides strategies to help librarians discover, articulate, and address students' self-efficacy, motivation, emotions and attitudes. Worksheets to assist in creating affective learning outcomes are included to bring structure to an area of learning that is often challenging to articulate and measure. Also included in the article are the results of a recent survey of instruction librarians' familiarity and inclusion of affective learning outcomes within teaching and learning initiatives.

INTRODUCTION

In higher education, librarians often look solely for student achievement in cognitive learning outcomes. The *Association of College & Research Libraries Information Literacy Competency Standards for Higher Education* focus almost exclusively on cognitive skills, highlighting the mechanics of learning how to find, evaluate and ethically use information effectively (ACRL, 2000). Yet understanding and articulating goals for students' emotional learning outcomes as they learn to master this research process is just as significant and central to student success. Constance Mellon, Carol Kuhlthau and others who focused on articulating the role of emotion in the acquisition of information literacy skills have noted the prevalence of library anxiety in college students (Kuhlthau, 2004; Mellon, 1986; Bostick 1992; Onwuegbuzie, Jiao, & Bostick, 2004; Nahl & Bilal, 2007). This anxiety, paired with students' other emotions and motivations, helps dictate the likelihood of student mastery of the research process. Acknowledgement of the importance of affective information literacy is essential in library instruction as students begin to apply their newly gained cognitive skills. As Constance Mellon wrote, "Where anxiety is present, it must be allayed before the work of instruction can begin" (1988).

From the very genesis of interest in learning and affect, the affective domain was seen as problematic. In 1956 Benjamin Bloom et al. in their now classic work on a taxonomy for the cognitive domain, stated this about their work on affect to date:

> Much of our meeting time has been devoted to attempts at classifying objectives under this domain. It has been a difficult task which is still far from complete. Several problems make it so difficult. Objectives in this domain are not stated very precisely; and, in fact, teachers do not appear to be very clear about the learning experiences which are appropriate to these objectives. It is difficult to describe the behaviors appropriate to these objectives since the internal or covert feelings and emotions are as significant for this domain as are the overt behavioral manifestations. Then, too, our testing procedures for the affective domain are still in the most primitive stages (1956, p. 7).

The relatively small amount of research into affective learning, as opposed to cognition, remains true to this day. According to Pierre and Oughton, the main reasons why learning in the affective domain continues to get short shrift are: emotions remain muddled and difficult to teach, understand and quantify; behavior modification has gone out of style; and, with an increasingly diverse group of students, values and attitudes are more and more rooted in diverse cultures and belief systems and therefore are hard to normalize (2007, pp. 7–10). Research into affect continues in such diverse areas as nursing (Howe, 2003; Schaber et al., 2010), inquiry based education (Saunders-Stewart et al., 2012), sustainability (Shephard, 2008; Buissink-Smith et al., 2011), the first-year experience (Beard et al., 2007), online learning (MacFadden, 2005), and graduate qualities and attributes (Birbek & Andre, 2009).

Librarianship has not ignored the affective domain. The American Association of School Librarians revised their information literacy standards in 2007 and published the *Standards for the 21st-Century Learner* (ALA, 2007). Affective outcomes, called dispositions in action, are now included along with more traditional cognitive goals.

Arnone, Reynolds and Marshal surveyed over 1,200 eighth-graders to find out more about the role librarians play in student motivation toward research and their valuing of the their research skills (2009). In the academic realm Jacqueline Coutney Klentzin asked first year freshmen, "Do you like research? Why or why not?" She found the majority of her students inhabited an "… intellectual borderland between two beliefs where the value of the research process was entirely dependent on the personal connection each student had to the research topic at hand" (2010, p. 565). The authors of this current article believe that if librarians address their students' affective needs, then more students will move away from this borderland and into a more productive research landscape.

For the purposes of this article, the affective domain will be defined as "A person's attitudes, emotions, interests, motivation, self-efficacy, and values" (Schroeder & Cahoy, 2008, p. 129). In order to meet affective needs of library instruction students, librarians must first recognize the specific affective needs their students have, and so the first section of this article explores issues around discovery of these needs. The second section focuses on creating concrete learning outcomes based on students' affective needs, and the third section showcases effective methods for assessing affective outcomes. As with all instructional design, once outcomes have been set, appropriate teaching methods must be chosen, and so successful teaching techniques from the literature are shared in the next section. Worksheets based on Kuhlthau's and Mellon's theories are provided at the end of this article (see Appendices A and B). Readers are invited to use these worksheets to create affective outcomes based on their own students' needs and to discover how to assess and teach to these affective outcomes. In order to understand more about academic librarians' feelings and motivations around affect and library instruction, a recent survey of librarians on these issues is analyzed in the last section of this article. The survey results underscored the great value academic librarians place on including affective learning outcomes in library research sessions. One survey respondent eloquently stated the many and synergistic benefits of focusing on affect as:

> Students who appreciate the value of the research process will do better. Students who are more engaged will retain more material. Students who are having a good time will be better engaged. For all these reasons, I believe that by addressing affect I am more likely to have a positive impact on students' learning, and if nothing else, their willingness to return to the library and to librarians for help later on in their research process. This also results in me feeling more satisfied in my profession, feeling as though I have more of a positive impact. When I am happier in my teaching that translates to a more comfortable and open environment that the students respond to.

WHERE DO YOU SEE AFFECTIVE NEEDS IN YOUR STUDENTS?

Carol Kuhlthau and Constance Mellon provide models for identifying appropriate affective information literacy learning outcomes for students. Kuhlthau's Information Search Process (ISP) organizes a student's feelings, thoughts, and actions during library research into six stages: initiation, selection, exploration, formulation, collection, and presentation. Each stage is linked with associated,

appropriate emotional reactions, including anxiety, frustration, interest, confidence, impatience, curiosity, and satisfaction (Kuhlthau, 1994). (See Supplemental File 1 for handout). For each stage in the research process, Kuhlthau identifies common feelings and strategies that library instructors can employ to help students effectively emotionally navigate each stage. For example, in the research topic exploration stage, Kuhlthau notes that students experiencing confusion, uncertainty and doubt as they try to find viable topics can manage and direct their emotional responses by listing search strategies, reading about topics they are considering, and using techniques that will help them intentionally seek an appropriate, focused topic. Similarly, and in a more positive light, students who have successfully completed their project and are feeling a sense of accomplishment during the final stage of the information search process can be encouraged to reflect on their search process, discussing what they learned and how they might change their search strategies in the future, as well as writing a summary statement of the work they accomplished over the course of the assignment. Acknowledgement of positive feelings is just as important as recognition of students' negative or anxious emotions, and librarians would be wise to consider the spectrum of emotional responses that students confront as they move through the research process. Kuhlthau provides a model that co-exists well with the cognitive *ACRL Information Literacy Competency Standards*, allowing librarians to think of each phase in the research process as a discrete opportunity for acquisition of positive affective behaviors.

Constance Mellon's view of students' affective needs centers on one central tenet: recognizing and resolving library anxiety

(Mellon, 1986). Mellon's pioneering research in this area showed that students experienced anxiety as they attempted to use the library and its resources, and significantly, that their anxiety reduced their ability to complete successfully the research process. Mellon places college students' library anxiety within four areas: interpersonal anxiety, perceived library competence (or lack thereof), perceived comfort with the library, location anxiety (both physical and online) and mechanical (or technical) anxiety. (See Supplemental File 2 for handout) Designing programs (such as library orientation initiatives or interactive online tutorials) and in-person or online library instruction with an implicit acknowledgement of student anxiety in these areas is critical to helping students feel positive about the library and integrate proficient information literacy achievements into their work.

Anticipating students' emotional responses and the impact of those reactions on acquisition of information literacy skills, both positive and negative, is the first step in articulating affective learning outcomes for students. In addition to noting the anxieties, confusion, or frustration that students may encounter as they develop their research skills, librarians must consider the positive behavioral outcomes that they want their students to develop. Building resilience, persistence, and positive learning dispositions in students requires intentional work on developing focused learning outcomes that build these critical emotional skills in our students.

WRITING AFFECTIVE STUDENT LEARNING OUTCOMES

Once students' affective needs are recognized, learning outcomes must be created that formally address those needs.

Much has been written about writing student learning outcomes so there are many proven models from which to choose. In higher education, the vast majority of articulated learning outcomes tends to be cognitive ones and are often written with Bloom's Taxonomy as a guide (Bloom, 1956). Fortunately the models used to create effective cognitive outcomes work extremely well with affective learning outcomes as well –as long as one attends to a few unique characteristics of affect.

Outcomes can be created for any area of affect – students' attitudes, emotions, motivation or values. As with all outcomes, affective ones should be specific, unambiguous, and measurable. One model for creating effective outcomes is the "ABCD Model." The ABCD stands for Audience, Behavior, Condition, and Degree. An example of an affective goal around motivation and persistence is, "Each time a student in the Graduate Education Research Methods class is confronted with obstacles during research, after he or she has tried to tackle the problem alone, he or she will show persistence by choosing to contact a person (librarian, instructor, classmate or friend) in order to overcome the research obstacle and continue researching." In this example the audience is students in the Education Department's Research Methods class, the behavior is "choosing to contact a person" for help, the condition is "if confronted with obstacles", and the degree is "each time" unsolvable obstacles are encountered.

Another model for writing outcomes that is often used in information literacy instruction is a model made popular by Debra Gilchrist in the ACRL Immersion Institute for Information Literacy (Gilchrist, 2000). This model consists of three parts: "in order to…";"a verb or action phrase,";

and "why." The example regarding student persistence above written in this style might be, "In order to overcome unsolvable research problems, a student will choose to contact a person for help (librarian, instructor, classmate or friend) thereby realizing the value of others in their research process." In this reworking of the outcome many of the criteria of the ABCD model are met, and persistence *and* valuing asking for help are both highlighted.

Looking at the example outcomes above, one of the most striking paradoxes of writing affective outcomes becomes evident. Even though the realm of affect deals with internal states (feelings, attitudes, and values), the way affective outcomes are assessed is often based on students' *behaviors*. As Hedges and Axelrod note:

> 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 (1995, p. 60).

In the example outcomes above, the students' motivation to persist or their valuing of external help is shown by their behavior – asking for help.

In "A Checklist for Designing in the Affective Domain," Barbara Martin points out two other key features of affective outcomes. " 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" (1989, p. 11). The second

example outcome above acknowledges that the action must be voluntary by using the word choose – "…a student will *choose* to ask a person…" It is also implied that the students have internalized their choice of asking by stating that they will be"… *realizing the value* of others in their research process." All of these critical criteria for writing affective outcomes, focusing on behaviors, the voluntary nature of the behavior, and the extent to which the behavior is internalized come into play in the assessment of the outcomes as well.

ASSESSING AFFECTIVE STUDENT LEARNING OUTCOMES

Balance is crucial in all assessment work. Due to time and staffing constraints, all of the outcomes or objectives for a class or a program cannot be assessed simultaneously – it is a matter of focus. Many times an assessment cycle exists and only a few outcomes are assessed at any one time. At other times assessment is motivated by feedback from instructors or observations by librarians such as: "Students just don't seem to be getting this concept. Is this true?" Affective outcomes are no different from cognitive ones in this regard, and if they have been created, they will need to be assessed from time to time. The full range of assessment tools (surveys, journals, pre and post-tests, focus groups, etc.) that exist for cognitive outcomes assessment can be employed (Choinski & Emanuel, 2006; Nahl-Jakobovits & Jakobovits, 1993; Wong, 2006).

Student *behavior* in regards to the library and the research process is the gold standard when assessing affective outcomes. Students' positive feelings toward the library and willingness to use it, as well as their persistence and self-efficacy in regards to research, are most clearly seen in how they act while doing research. The trade off with assessing behavior is that it is time intensive and it requires an observer to be present when the behavior is happening. As the 50-minute one-shot session is still the norm for library research sessions on the majority of campuses, behavioral assessment can be problematic. The example outcome written above ("In order to overcome unsolvable research problems, a student will choose to contact a person for help thereby realizing the value of others in their research process") could conceivably be assessed in a 50-minute session. Part of the 50-minute session could be devoted to hands-on application of the research methods taught in the class. The librarian and any other observers in a classroom (faculty members, graduate assistants, and colleagues) could listen to student conversations while moving about the room and anytime they hear a student asking a peer (or themselves) for assistance they could record the data. While this would be time intensive, it may be occasionally doable in some situations. But there is also an acceptable alternative.

As Martin writes, "The rule of thumb is to procure observable behavior, whenever possible. When that is not possible, use self-report data" (1989, p. 9). Students can self-report in a variety of ways. A one-minute reflection paper at the end of the class session might ask, "If you couldn't find any peer-reviewed journal articles on your topic, what would you do?" Or questions of this ilk might be posed on an exit survey, which could potentially be filled out online or with clickers. An advantage that instantaneous feedback in class provides is that all of the students will benefit from seeing their peers' answers and learning from them. Students could also be asked to keep a journal of research problems and solutions, or they could be asked to write a short reflection

paper that dealt with a research problem they encountered during the term and how they solved it. This too can be done online via a blog or wiki so that students can see each other's research problems as well as their colleagues' perseverance and their solutions to their problems. But there are also trade-offs with self-report data.

When students self-report data, they can be motivated by many factors. They may embellish or create situations in order to get points for an assignment or to arrive at an answer they believe a librarian or instructor might desire. Respondents may also "acquiesce" or "satisfice." As Dykema et al. write, "Acquiescing is the tendency of respondents to agree to or passively accept a proposition offered by the question. Satisficing is similar but somewhat broader. Satisficing occurs when respondents engage in the minimum amount of processing necessary to respond to a question, but without wholly investing in providing the most accurate answer possible" (2008). With self-report data, as opposed to behavioral observation, one must trust that respondents' actions are as they report them to be. One way to better assure the reliability of self-report data is to pose multiple questions that get at the same issue in different ways. Another way is to verify self-reported information occasionally with random observations. Smyth and Terry (2007, p. 878) state:

> Critically evaluating questions to ensure that they are presented clearly, framed in the proper context, and accompanied by appropriate response formats can help prevent self-report data from being compromised by measurement constraints or response biases. Clearly informing respondents as to the intended use, privacy, and protection of self-report information can also reduce

self-presentation concerns and facilitate more veridical reporting. A number of innovative self-report methodologies, such as daily diaries and ecological momentary assessment, have addressed some of these concerns by considerably limiting the recall periods (i.e., to a day or even a few minutes) and providing an ecologically valid alternative to lengthy retrospective reporting. By carefully considering these issues, researchers can effectively use self-report as a fast, cheap, and practical method for collecting personal information across a variety of research and applied settings.

On the positive side, with self-report data one can begin to ascertain the extent to which the students have internalized a value or disposition. Internalization is a measure of the extent to which an individual values an item in the affective domain. It was first used by Krathwohl, Bloom and Massia in their 1964 classic *Taxonomy of Educational Objectives, The Classification of Educational Goals. Handbook II: Affective Domain*. They describe internalization as:

> 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 (p. 28).

Krathwohl et al. also described five levels of internalization – *receiving, responding, valuing, organizing, and characterization by a value complex* (1964, p. 35). As a value moves up these levels it is considered to be more internalized. In regards to the example outcome related to asking for help while doing research (above), a survey could not only inquire if the students asked for help, but *why* they asked for help. Some students might say it was because they didn't know what else to do, which would indicate a low level of internalization -- perhaps at the "Receiving" or "Responding" level. Other students may respond that they have seen how important asking for help has been in the past and so they know it saves them time – which would imply they have internalized this disposition at a "Valuing" level. There will always be a range of levels of internalization of any value, but well-constructed rubrics could tease out levels of internalization from self-reported data. A level of "Receiving" might be appropriate for students in a freshmen class, while graduate students would probably be expected to be at least at the "Valuing" level of internalization.

TEACHING TO AFFECT

Once student behavior-focused affective learning outcomes have been articulated, the work of integrating activities into the classroom that foster engagement and development of positive behaviors begins. There are a variety of teaching strategies that help students build positive affective behaviors. Analyzing identified outcomes and selecting appropriate exercises for

students to build on their skills is important, as well as providing opportunities for assessment of affective information literacy skills. Even informal activities give students a chance to foster their positive behaviors.

An important accompaniment to affective learning-focused activities is the affect of the library instructor. As an instructor, are you welcoming, approachable and helpful? Are you attuned to the affective needs of your students? Being attuned to their needs may mean making a choice relative to students' needs or perceived retention and reducing (or increasing) the number of concepts planned for a specific class. In some respects, listening to students' feedback, and basing the focus of the class around students' articulated needs (rather than what the librarian feels they 'need' to learn) may indeed be the most important concept in affective-focused teaching. As the students explore research tools, internalize their skills, and learn to develop confidence and resilience in their work, the opportunity to cover more advanced in-depth research tools and strategies will become an option.

EXAMPLES OF AFFECTIVE LIBRARY INSTRUCTION

Academic librarians have been teaching to student learning outcomes for years. The vast majority of the teaching has been to cognitive learning outcomes, which is appropriate considering that the *ACRL Information Literacy Competency Standards for Higher Education* deal almost exclusively with cognition. Some librarians are incorporating Mellon's and Kuhlthau's theories into the design of their library research sessions. While much of the practice-based research on integrating affect into the classroom was published in the

1990's (as affect came to the forefront in library instruction), the teaching strategies remain relevant for both online and in-person instruction.

In their article, "Teaching Anxious Students Skills for the Electronic Library," Mark and Jacobson (1995) explain how they address students' library and technology anxiety. While the students they worked with only came to the library for one or two sessions, Mark and Jacobson collaborated with the teaching faculty to have the students keep research journals for the whole semester. The students were prompted to write about their attitudes toward research in their initial journal posting and the librarians and the instructors read and commented on the students' journal postings as the course developed. As the semester progressed the students were prompted to reflect on any other frustrations they had with their research, and they were also asked if any of their feelings had changed over time. In this way the students' journal postings could be used both formatively during the term and after the term to improve future classes. This teaching strategy helps students articulate and recognize their emotional challenges (and gains) throughout the research process.

Isbell and Kammerlocher (1998) report on their model of dealing with students' emotions around research in "Implementing Kuhlthau: A New Model for Library and Reference Instruction." As the title of their article suggests, the authors adapted Kuhlthau's Information Search Process as the basis for their course design. The students they taught were mostly college juniors and seniors enrolled in a one-credit Effective Library Research class. In order to foster self-awareness about research skills, students were asked during the first class to reflect on research assignments and how

they feel about beginning the research process. The students then were asked to share their experiences with others in a group, with groups reporting out on their findings. The responses were compiled and later distributed to the class (1998, p. 36)[1]. Although no formal assessment was done, Isbell and Kammerlocher informally found that their students' responses corresponded to Kuhlthau's findings and that the ISP model was helpful in framing their class sessions. This model of individual and group sharing helped students see that their feelings about the research process (whether positive or negative) are mirrored in their classmates. A challenge for the instructor in using this model is to frame it as a positive starting point, a beginning upon which students can build and articulate new research goals.

Inspired by Kuhlthau, Dale Vidmar has also successfully addressed the affective needs of his students by designing unique, short pre-sessions for his students. Vidmar writes:

> …if the goal of library instruction is to impart knowledge and skills to individuals attempting to pursue and locate information, then the success of library instruction as a program may be dependent in part upon establishing a receptive attitude and emotional response within the students. If students have attitudes contrary to instruction, believing that what they are being taught is meaningless or not applicable, then it is likely they will not follow through with behaviors corresponding with the learning objectives of that instruction (1998, p. 78).
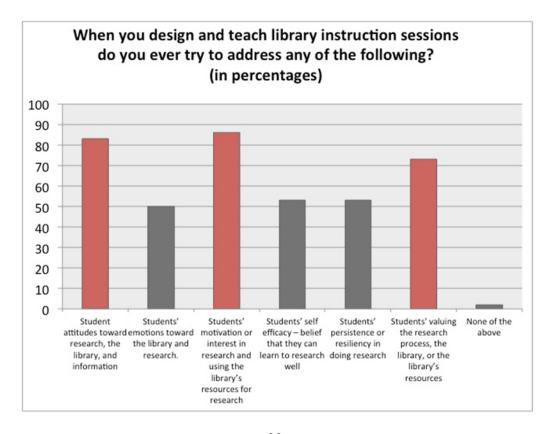
Vidmar created a 20-minute "warmth session" for students, delivered prior to a regular library instruction session for three

of six sections of college freshmen composition classes at Southern Oregon University. These warmth sessions were meant to build rapport between the librarian and the students and to assure them that there were library services and tools that would help them with their research. Three other sections of the composition classes only had the regular instruction session. The students in all of the sections took an attitudinal survey both prior to the warmth session (if they were having one) and after the regular library instruction session. From the results of his survey, Vidmar found that "…the pre-session had an overall positive effect on the students' attitudes, beliefs, and intentions in conjunction with the library, librarian, the intended use of the library, and library instruction classes" (1998, p. 92).

"Affect can be just as important as content": Surveying Librarians' Use of Affective Learning Outcomes

The examples of teaching to affective goals provided above are good models for librarians to use and demonstrate the range of methods that can be utilized effectively to incorporate affective outcomes into library research sessions. The authors of this article posited from these examples and from their own experiences with affective outcomes that many more librarians were already considering the affective needs of their students. But to what degree were these affective outcomes consciously created and formally written and assessed? The authors

Table 1 — Addressing Affective Factors

Chart titled "When you design and teach library instruction sessions do you ever try to address any of the following? (in percentages)"
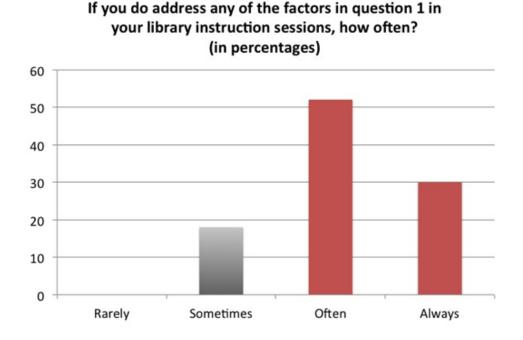
conducted a web-based survey of instruction librarians in fall, 2011, to understand better the knowledge and approaches of teaching librarians with regard to implementing and addressing affective instructional objectives. The survey contained eight questions (see Supplemental File 3 for instrument) and was distributed online via ILI-L, a listserv for instruction librarians.

The response to the survey was positive — 275 librarians completed the survey. While this sample size may not be representative of the instruction librarian population as a whole, as it only reflects librarians who subscribe to ILI-L, are open to participating in surveys and are interested in affective learning, it does provide a useful snapshot of current instructional practices and librarians' beliefs relevant to affective,

emotionally based instruction. A majority of survey participants (86%) indicated that they try to address students' motivation or interest in research and using the library's resources for research, and that they try to address students' attitudes towards research, the library and information (83%), as well as students' perceived value of the research process, the library, or the library's resources (73%) (See Table 1). As one respondent noted, "I don't believe it is possible to teach effectively and not address these issues. Learning is an affective process." Respondents reported that they were less likely to address students' emotions toward the library and research in instruction sessions (50%), and address students' self-efficacy (53%) or persistence or resilience in the research process (53%) within library instruction. Only 5

TABLE 2 — FREQUENCY OF ADDRESSSING AFFECTIVE OUTCOMES

If you do address any of the factors in question 1 in your library instruction sessions, how often? (in percentages)

respondents (2%) indicated that they never addressed any affective outcomes at all. As one respondent said in a follow-up comment, "I find the topic interesting and have generally thought about it in terms of students' attitudes and motivations but have not really considered issues of emotions or self-efficacy. Maybe I should."
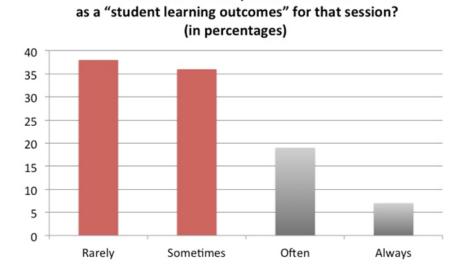
The next survey question asked how often they addressed affective factors and 30% of the respondents said they always addressed at least one affective factor in their classes and over 50% stated they often addressed them (See Table 2).

While respondents did, overall, seem to have an understanding of the basic elements of affective learning, they were not, as a majority, articulating affective learning outcomes in their instruction. Almost three-

quarters (74%) of the respondents said that they only sometimes or rarely format and utilize formal affective learning outcomes (See Table 3).

Similarly, 88% of respondents noted that they rarely or only sometimes assess affective learning outcomes in the classroom (See Table 4). Some respondents noted that the survey itself helped increase their awareness of affective learning, yet wondered how these outcomes could be assessed in a more formal, quantitative manner: "This survey is a reminder that I could do a lot more to address students' understandable aversion to the tangled web of databases, catalogs, etc…" and "I would love to see more resources on how to address emotions and values without having to make assumptions about what those feelings / values might be."

TABLE 3 — ARTICULATING AFFECTIVE OUTCOMES

If you do address any of the factors in question 1 in your library instruction sessions, do you consciously think of or formally articulate them as a "student learning outcomes" for that session? (in percentages)

Overall, survey respondents indicated that while they are comfortable acknowledging students' feelings and motivations regarding the research process, they are less likely to think about emotional behaviors that can be highly beneficial to student development of information literacy skills---self-efficacy, persistence, resiliency, and emotions in general (See Table 3).
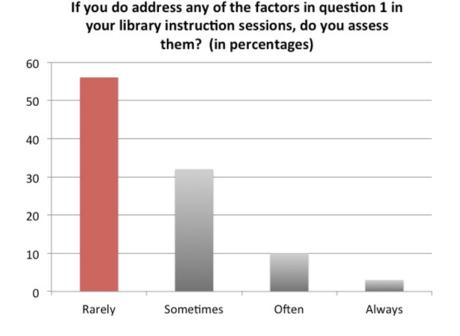
This, coupled with the indication that few librarians are formally assessing affective learning, leaves much room for helping instruction librarians learn how to understand, address, and assess student affective learning outcomes. Respondents overall were highly positive about affective learning, and many shared comments regarding the importance of this concept:

"I want students to know that when they get frustrated or impatient with the iterative

nature of good research that it is a normal process."

CONCLUSION

Martin states, "The affective domain is a complex and often nebulous area in which to design instruction" (p. 7). This is a resonant truth, and yet there are strategies that we can employ to help students build positive, affective outcomes relevant to information literacy. This article provides a blueprint for beginning this process—understanding affective learning outcomes, identifying relevant and measurable affective outcomes for students, and employing and assessing affective outcomes in instruction. Just as important is the simple acknowledgement that librarians must model positive affective behaviors for their students. The low-stakes practice of reserving time before an instruction session

TABLE 4 — ASSESSING AFFECTIVE OUTCOMES

If you do address any of the factors in question 1 in your library instruction sessions, do you assess them? (in percentages)

to walk around and greet each arriving student with a pleasant and personal welcome is an easy way to begin to embed affective learning within your own teaching. Being sympathetic to student anxieties and students' capacity to learn specific subjects will humanize library instruction and help maximize students' readiness to be taught new, relevant concepts. As one of our survey respondents wrote: "In my opinion, equal emphasis should be placed on the cognitive and affective domains during library instruction. If they are both addressed and assessed, we might see a lot of improvement where it counts: in student willingness to apply these skills and take the initiative to learn more."

The next step towards implementing affective information literacy learning outcomes within the profession, and locally at individual institutions, is to lobby for inclusion of affective learning outcomes in information literacy standards and institution-wide curriculum (Schroeder and Cahoy, 2010). While hard to measure quantitatively, affective learning outcomes provide a wealth of qualitative data on the lasting impact of information literacy instruction on students' mastery of the research process.

NOTE

1. One of the authors has used a similar method successfully in one-shot classes. At the beginning of a class the students are asked to fill out a card by completing the phrase, "When I think about doing research I feel…." The responses are collected and tallied on the whiteboard and the author and students discuss how these feeling were documented by Kuhlthau and how they are shared by most researchers, the author included, no matter how expert they are. The whole exercise takes less than 15 minutes.

REFERENCES

American Association of School Librarians (2007). *Standards for the 21st-century learner*. AASL. Retrieved from http://www.ala.org/aasl/sites/ala.org.aasl/files/content/guidelinesandstandards/learningstandards/AASL_Learning_Standards_2007.pdf

Arnone, M., Reynolds, R. & Marshall. T. (2009). The effect of early adolescents' psychological needs satisfaction upon their perceived competence in information skills and intrinsic motivation for research. *School Libraries Worldwide, 15*(2), 115–134.

Association of College & Research Libraries. (2000). *Information literacy competency standards for higher education*. Retrieved from http://www.ala.org/acrl/standards/informationliteracycompetency

Beard, C., Clegg, S. & Smith, K. (2007) Acknowledging the affective in higher education. *British Educational Research Journal, 33*(2), 235–252.

Birbeck, D. & Andre, K. (2009). The affective domain: Beyond simply knowing. In J. Milton, C. Hall, J. Lang, G. Allan, M. Nomikoudis (Eds.), *Proceedings of ATN Assessment Conference 2009 : Assessment in Different Dimensions*, Learning and Teaching Unit, RMIT University, Royal Melbourne Institute of Technology, Melbourne, pp. 40-–47. Retrieved from http://emedia.rmit.edu.au/atnassessment09/sites/emedia.rmit.edu.au.atnassessment09/files/ATNA09_Conference_Proceedings.pdf#page=40

Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational*

objectives: The classification of educational goals. Handbook I: Cognitive Domain. New York: Longman, Green.

Bostick, S. L. (1992). *The development and validation of the library anxiety scale*. Retrieved from Dissertations and Theses. AAT 9310624.

Buissink-Smith, N., Mann, S., & Shephard, K. (2011). How do we measure affective learning in higher education? *Journal of Education for Sustainable Development, 5* (1), 101-–114.

Cahoy, E. S. (2004). Put some feeling into it! Integrating affective competencies into K –20 information literacy standards. *Knowledge Quest: Journal of the American Association of School Librarians*, *32*(4), 25–28.

Choinski, E., & Emanuel, M. (2006). The one-minute paper and the one-hour class: Outcomes assessment for one-shot library instruction. *Reference Services Review*, *34* (1), 148–155.

Dykema, J., Blixt S., &Stevenson, J. (2008). Respondent-related error. In *Encyclopedia of survey research methods*. SAGE Publications. Retrieved from http://www.sage-ereference.com/survey/Article_n483.html

Gilchrist, Debra. (2000) Institute for Information Literacy, Ohio Immersion '00 Track 1 (Binder). Association of College and Research Libraries.

Hedges, L. E., & Axelrod, V. M. (1995). *Assessing Learning*. Columbus, Ohio: Vocational Instructional Materials Laboratory, Ohio State University.

Howe, A. (2003). Twelve tips for

developing professional attitudes in training. *Medical Teacher, 25*(5), 485–487.

Isbell, D., & Kammerlocher, L. (1998). Implementing Kuhlthau: A new model for library and reference instruction. *Reference Services Review*, *26*(3/4), 33–44.

Klentzin, J. (2010). The borderland of value: Examining student attitudes towards secondary research. *Reference Services Review, 38*(4), 557–570.

Kracker, J. (2002). Research anxiety and students' perceptions of research: An experiment. Part I. Effect of teaching Kuhlthau's ISP model. *Journal of the American Society for Information Science and Technology*, *53*(4), 282–294.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives; The classification of educational goals. Handbook II: The affective domain*. New York: Longman, Green.

Kuhlthau, C. C. (1994). *Teaching the library research process*. Metuchen, N.J.: Scarecrow Press.

Kuhlthau, C. C. (2004). *Seeking meaning: A process approach to library and information services*. Westport, Conn.: Libraries Unltd Inc.

Lavrakas, P. J. (2008). *Encyclopedia of survey research methods* (Vol. 2). Thousand Oaks, CA: Sage Publications.

MacFadden, R. (2005). Souls on ice: Incorporating emotion in web-based education. *Journal of Technology in Human Services, 23*(1/2), 79–98.

Mark, B. L., & Jacobson, T. E. (1995). Teaching anxious students skills for the

electronic library. *College Teaching, 43*(1), 28–31.

Martin, B. L. (1989). A checklist for designing instruction in the affective domain. *Educational Technology*, *29*(8), 7–15.

Mellon, C. A. (1986). Library anxiety: A grounded theory and its development. *College & Research Libraries*, *47*(2), 160–165.

Mellon, C. A. (1988). Attitudes: The forgotten dimension in library instruction. *Library Journal*, *113*(14), 137–39.

Nahl-Jakobovits, D., & Jakobovits, L. A. (1993). Bibliographic instructional design for information literacy: Integrating affective and cognitive objectives. *Research Strategies*, *11*(2), 73–88.

Nahl, D., & Bilal, D. (2007). *Information and emotion: The emergent affective paradigm in information behavior research and theory*. Medford, N.J.: Information Today Inc.

Onwuegbuzie, A. J., Jiao, Q. G., & Bostick, S. L. (2004). *Library anxiety: Theory, research, and applications*. Lantham, Md.: Scarecrow Pr.

Pierre, E. & Oughton, J. (2007). The affective domain: Undiscovered country. *College Quarterly, 10*(4). Retrieved from: http://www.collegequarterly.ca/2007-vol10-num04-fall/pierre-oughton.html

Saunders-Stewart, K., Gyles, P., & Shore, B. (2012) Student outcomes in inquiry instruction: A literature-derived inventory. *The Journal of Advanced Academics, 23*(1), 5–31.

Schaber, P., Wilcox, K., Whiteside, A., Marsh, L. & Brooks, D. (2010). Designing learning environments to foster affective learning: Comparison of classroom to blended learning. *International Journal for the Scholarship of Teaching and Learning, 4*(2). Retrieved from http://eaglescholar.georgiasouthern.edu:8080/jspui/bitstream/10518/4132/1/_Schaber_et_al.pdf

Schroeder, R., & Cahoy, E. S. (2010). Valuing information literacy: Affective learning and the ACRL standards. *Portal: Libraries and the Academy, 10*(2), 127–146.

Shephard, K. (2008). Higher education for sustainability: Seeking affective learning outcomes. *International Journal of Sustainability in Higher Education, 9*(1), 87–98.

Smyth, J., & Terry, C. (2007). Self-Report. In Salkind, N.J. (Ed.), *Encyclopedia of measurement and statistics* (Vol. 1, pp.).Thousand Oaks, CA: SAGE Publications, Inc.

Vidmar, D. J. (1998). Affective change: Integrating pre-sessions in the students' classroom prior to library instruction. *Reference Services Review*, *26*(3/4), 75–95.

Wong, W.L. (2006) Affective outcomes assessment: Valuing the exit survey from a one-shot library instruction session on 'Googling' better and web evaluation. Retrieved from http://www2.hawaii.edu/~nahl/students/665_outcomes_assess_wong.htm

Yorks, L., & Kasl, E. (2002). Toward a theory and practice for whole-person learning: Reconceptualizing experience and the role of affect. *Adult Education Quarterly*, *52*(3), 176–192.

APPENDIX A — AFFECTIVE OUTCOMES – WORKSHEET BASED ON MELLON'S LIBRARY ANXIETY MODEL

1. Mellon's Theory of Library Anxiety	2. Examples from your experience	3. Write an outcome	4. How would you assess it?	5. How could you teach to this?
"Other students are competent in library research but not me." "I must not ask questions or otherwise let on that I'm incompetent in library skills"				
"The library is not comfortable."				
"The staff of the library is unfriendly."				
"The library is big, strange and scary."				
"The library's web page is inscrutable, opaque and unhelpful."				
Other Affective needs regarding research or the library: • *Self-confidence/ Self-efficacy* • *Resiliency/ persistence* • *Motivation* • *Interest* • *Willingness*				

APPENDIX B — AFFECTIVE OUTCOMES – WORKSHEET BASED ON KUHLTHAU'S ISP MODEL

1. Kuhlthau's ISP Model	2. Examples from your experience	3. Write an outcome	4. How would you assess it?	5. How could you teach to this?
Apprehension and uncertainty in initiating a research assignment.				
Confusion, anxiety, and anticipation in selecting a topic.				
Confusion, doubt, and threatened by exploring information.				
Not confident in formulating a focus.				
Sense of disappointment after attempting research.				
Other Affective needs regarding research or the library: • *Self-confidence/Self-efficacy* • *Resiliency/persistence* • *Motivation* • *Interest* • *Willingness*				