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Reconsidering the Conceptualization and Operationalization of Affective Learning

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Forum: Affective Learning

Editor's Introduction: What Exactly Are We Studying?

The mission of *Communication Education* is to publish the best research on communication and learning. Researchers study the communication-learning interface in many ways, but a common approach is to explore how instructor and student communication can lead to better learning outcomes. Although scholars have long classified learning into three domains—cognitive, affective, and behavioral—we do not often investigate behavioral learning in instructional communication research. Thus, the focus of most of our research in instructional communication is on cognitive and affective learning.

If you want to study learning, one of the most important tasks is to measure learning accurately. That undertaking proves difficult. Although our ability to see the human mind at work has improved dramatically in recent years (see Mottet's essay), we still lack the would-be-handy ability to read minds. Thus, cognitive learning has traditionally been measured by scholars across all disciplines with tangible outputs that should demonstrate learning—exactly as teachers attempt to assess their students' learning in the classroom.

A few decades ago scholars began to use self-report measures of cognitive learning instead of performance based measures. While this approach has been used across many disciplines, nowhere is it as prevalent as in Communication (Sitzmann, Ely, Brown, & Bauer, 2010). Self-report measures offer some advantages to researchers, including the ability to collect data across a wider array of instructors, and most obviously, increased ease and speed of data collection. They have dominated our discipline's instructional communication research since their introduction to our field in 1987. Unfortunately, these self-report measures also possess a fatal flaw: They correlate far better with affect for the course or instructor than with any performance-based measure of learning (Bowman, 2010; Hess, Smythe, & Communication 451, 2001; Hooker & Denker, 2014; Sitzmann et al., 2010; Witt, Wheeless, & Allen, 2004). These data show that the body of research using student self-report measures of cognitive learning tells us more about learners' affect than about learning itself.

For affective learning, measurement includes another challenge. In addition to the question of performance versus self-report, scholars have to address the question of what exactly affective learning is. In their original formulation, Krathwohl, Bloom, and Masia (1956) characterized it as subject matter learning on topics relevant to the affective domain, such as attending, responding, and valuing. To measure it,

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scholars need to know the instructor's affective goals and then find a way to measure whether those learning goals had been met. However, affective learning has traditionally been measured in instructional communication research with a self-report instrument that assesses students' liking of the course content and instructor (see Myers and Goodboy's essay for more on the origins of this measure).

The question of whether our measures of affective learning are assessing learning or just affect was brought to our discipline's attention by Jo Sprague more than a decade ago. She wrote,

> The set of attitudes being assessed by these scales would be more descriptively named something like "affect toward the course and instructor." As such, it is a tremendously important factor—one that is definitely enacted through communication and one that deserves continued study. We are not well served, though, by naming this affective learning at the risk of giving the impression that we see having students feel positively toward the course and instructor as a learning goal itself rather than a means to more important goals … . It must be strange indeed to readers from other fields that our researchers can make claims that students have increased affective learning without knowing the affective goals of any of the courses involved. (2002, pp. 346–347; see a further exploration of these ideas in Bolkan's essay)

This concern brings us to critical point for the field. If (a) we rarely measure behavioral learning, (b) the self-report measures that dominate research on cognitive learning tell us about affect rather than learning, and (c) our measures of affective learning also seem to measure affect rather than learning, do we really know anything about communication and learning?

These points would be embarrassingly damning of our field's research over the last few decades if the answer was simply, "all we know about is affect in the college classroom, not learning." However, several counterpoints need to be kept in mind. First, scholars in our field have sometimes assessed students' learning using performance measures, so not all of our data rely on self-reports. Second, the issues surrounding the nature of affective learning and how it should be measured are too complex to be reduced to simplistic sound bites as the question makes it seem. Nevertheless, the apparent disconnect between theory and measurement makes it essential that we address this question. This importance is amplified by how popular affective learning is in our research. Just in the past five years, more than a third of all articles in *Communication Education* have collected data on affective learning.

This forum explores the study of affective learning by addressing two critical questions that define our field's exploration of the topic:

(1) What is affective learning?
(2) How should we measure affective learning in instructional communication research?

This forum initiates conversation on this topic. It begins with four essays that offer a range of perspectives from researchers who have been explored affective learning in recent years. To move from monologue to dialogue, I have asked three scholars with expertise on this topic to respond to the initial essays. I offer my gratitude to

everyone who submitted essays, including those whose work I did not have space to publish. The richness of these papers made me wish I could have put all ideas into print.

I hope that as you read this forum you see just how multifaceted this topic is, and that find yourself wishing *you* could respond to points you read. As with all forums, the goal is to stimulate conversations that play out as office conversations, classroom discussions, conference panels, and published scholarship. I invite you to add your response in those settings and beyond.

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University of Dayton

References

Bowman, N. A. (2010). Can 1st-year college students accurately report their learning and development? *American Educational Research Journal*, *47*, 466–496.

Hess, J. A., Smythe, M. J., & Communication 451. (2001). Is teacher immediacy actually related to student cognitive learning? *Communication Studies*, *52*, 197–219.

Hooker, J., & Denker, K. (2014). The learning loss scale as an assessment tool: An empirical examination of convergent validity with performative measures. *Communication Teacher*, *28*, 130–143.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook II: Affective domain*. New York, NY: David McKay Company.

Sitzmann, T., Ely, K., Brown, K. G., & Bauer, K. N. (2010). Self-assessment of knowledge: A cognitive learning or affective measure? *Academy of Management Learning & Education*, *9*, 169–191.

Sprague, J. (2002). *Communication Education*: The spiral continues. *Communication Education*, *51*, 337–354.

Witt, P. W., Wheeless, L. R., & Allen, M. (2004). A meta-analytic review of the relationship between teacher immediacy and student learning. *Communication Monographs*, *71*, 184–207.

Reconsidering the Conceptualization and Operationalization of Affective Learning

Scott A. Myers & Alan K. Goodboy

Since the introduction of the student affect construct to the instructional communication field by both Scott and Wheeless (1977) and Andersen (1979), their work

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has heavily influenced the manner in which instructional communication researchers utilize and measure the construct of affective learning. Initially, they suggested that student affect could be operationalized toward the communication practices suggested in a course, toward the subject matter/content of a course, toward a course in general, and toward the instructor of a course. These suggestions then morphed into a measure of affective learning (Andersen, Norton, & Nussbaum, 1981; Nussbaum & Scott, 1979) that was later refined by both McCroskey (1994) and Mottet and Richmond (1998). Despite these collective efforts, however, both the application and measurement of student affective learning remain problematic. In this forum piece, we explicate the original conceptualization of affective learning and use it to frame several recommendations for measuring the construct in future instructional communication studies.

Conceptualization

Admittedly, instructional communication scholars have done a poor job with conceptualizing and operationalizing learning in general. We are a field that has relied on convenient methods, opting for student self-report proxies of learning instead of assessing what students really know and how their knowledge base grows because of effective instruction. The same is true for affective learning. Our research has been misguided in the affective domain by focusing on whether students appreciate their instructors and like what they are learning, instead of how they respond to, buy in to, and value the material they are learning. Indeed, we have defined affective learning in ways that cannot allow us to measure the construct adequately, sacrificing content validity. Even worse, we have been using superficial measurements of the construct for decades. Although we admit guilt in using these measurements in our own past research, we think it is time to finally address the affective learning problem that has plagued the discipline since 1979.

Recognizing that affective learning has been defined in various ways, Krathwohl, Bloom, and Masia (1964) conceptualized the affective domain as

> Objectives which emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience … objectives in the literature expressed as interests, attitudes, appreciations, values, and emotional sets of biases. (p. 7)

They viewed affective learning as a hierarchical taxonomy, ranging from receiving (i.e., willing to process information), responding (i.e., committing to active learning of the information), valuing (i.e., believing that the information has value and worth), organization (i.e., organizing learned values into a cognitive system), and characterization by a value or value complex (i.e., behaving in a way that is internally consistent with values). Thus, affective learning is really about the "the process of internalization [which] can be described by summarizing the continuum at successive levels as they appear in the affective domain taxonomy" (p. 33), and is not about whether students like the course, the recommended course behaviors, or the course instructor.

Table 1 Affective Domain of Learning

1.0. Receiving (attending)
1.1. Awareness
1.2. Willingness to receive
1.3. Controlled or selected attention
2.0. Responding
2.1. Acquiescence in responding
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)
4.0. Organization
4.1. Conceptualization of a value
4.2. Organization of a value system
5.0. Characterization by a value org value complex
5.1. Generalized set
5.2. Characterization

Krathwohl et al. outlined categories and subcategories of the hierarchical taxonomy, which are presented in Table 1.

Operationalization

While we are not yet able to offer a new measure of affective learning, in part due to the limited scope of this forum, we would like to offer some recommendations for how affective learning should be measured in future research projects given Krathwohl et al.'s (1964) definition. First, we recommend that instructional communication researchers focus on the hierarchical structure of affective learning. Affective learning is not a unidimensional construct in which students either experience learning or do not experience learning. Rather, affective learning needs to be considered as a higher-order construct that is successive in formulation (e.g., a student cannot value course material without first paying attention). Measurements of a higher-order construct necessitates the use of special factor-analytic considerations (i.e., second-order confirmatory factor analysis; Brown, 2015).

Second, we suggest that instead of measuring affective learning at the end of the semester, which is the time frame many instructional communication researchers use to assess student learning, affective learning should be measured with both a pre-test and a post-test. The pre-test should be administered during the first day or the first week of a semester, with the post-test administered either during the last week of a semester or at a time that is appropriate given the purpose of the study. While the time frame itself is not the issue, it is important to assess affective learning both pre- and post-, not only so that it will be possible to determine the level of affective learning a student possesses at both the beginning and the end of a course or study, but also as a way to ascertain whether affective learning remains constant or fluctuates over the course of a semester or study.

Third, we believe that we need to focus solely on the extent to which students value the material rather than measuring their affect toward the course, the recommended course behaviors, or the instructor. Our current way of measuring affective learning amounts to nothing more than measuring whether students like the course, consider using the recommended course behaviors, or like the instructor. While student liking certainly is beneficial to the teaching–learning process, and creating student affect may be central to securing student compliance, it is *not* affective learning. As instructional communication researchers, we tend to use the terms *affect* and *affective learning* interchangeably, but the terms neither share the same meaning nor can they be applied in the same manner.

Fourth, we need to remember that the study of affective learning should not be confined to one course or limited to one semester, which essentially is what the current measurement of affective learning accomplishes. Instructional communication is more than the study of what students learn affectively from a particular teacher in a particular course at a particular point in time, which is relatively short-term. Instead, we need to consider that affective learning is a lifelong process (especially the organization and characterization levels); as such, we need to develop or modify measures of affective learning that are grade level-, course-, or context-specific to align with a corresponding affective learning objective. Doing so will allow us to get at the core of what may constitute affective learning in a particular learning environment at a given point rather than trying to force the affective learning construct into any situation. It is time for instructional communication scholars to embrace the conceptual and operational intentions of Krathwohl et al. (1964), and to no longer rely on previous scholarship that has done little to advance our understanding about student learning beyond what students like or dislike.

References

Andersen, J. F. (1979). Teacher immediacy as a predictor of teaching effectiveness. In D. Nimmo (Ed.), *Communication yearbook 3* (pp. 543–559). New Brunswick, NJ: Transaction Books.

Andersen, J. F., Norton, R. W., & Nussbaum, J. F. (1981). Three investigations exploring relationships between perceived teacher communication behaviors and student learning. *Communication Education*, 30, 377–392. doi:10.1080/03634528109378493

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). New York, NY: Guilford Press.

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

McCroskey, J. C. (1994). Assessment of affect toward communication and affect toward instruction in communication. In S. Morreale & M. Brooks (Eds.), *Assessing college student competency in communication* (pp. 56–70). Annandale, VA: Speech Communication Association.

Mottet, T. P., & Richmond, V. P. (1998). Newer is not necessarily better: A reexamination of affective learning measurement. *Communication Research Reports*, 15, 370–378. doi:10.1080/08824099809362136

Nussbaum, J. F., & Scott, M. D. (1979). Instructor communication behaviors and their relationship to classroom learning. In D. Nimmo (Ed.), *Communication yearbook 3* (pp. 561–583). New Brunswick, NJ: Transaction Books.

Scott, M. D., & Wheeless, L. R. (1977). Communication apprehension, student attitudes, and levels of satisfaction. *Western Journal of Speech Communication*, 41, 188–198. doi:10.1080/10570317709389611

Affective Learning: Evolving from Values and Planned Behaviors to Internalization and Pervasive Behavioral Change

Katherine S. Thweatt & Jason S. Wrench

What Is Affective Learning?

Krathwohl, Bloom, and Masia (1964) argue for five specific levels of affective learning: (1) receiving (awareness/willingness to attend to an instructional message), (2) responding (willingness to respond and/or actively engage instruction), (3) valuing (seeing the significance of a particular behavior, idea, object, or phenomenon.), (4) organizing (comparing and contrasting competing value systems in an effort to relate and synthesize values), and (5) characterization by a value or value set (value system, characteristic life style). However, most discussions of affective learning either discuss all five levels together or simply evaluate levels 2 and 3 (e.g., McCroskey, 1994; Messman & Jones-Corley, 2001). Krathwohl et al.'s (1964) model of affective learning does an excellent job of explaining the process of affect in the initial stages and the long-term, life aspects of affective learning. However, these larger, more internal value-driven factors are rarely discussed in communication literature.

What we have failed to focus on, in the field of communication, is the aspect of affective learning referred to as the characterization of values or value set that persists over time and that pervades all aspects of life (Krathwohl et al., 1964). We can safely assume that teachers wish to evoke long-term change in their students. In addition, teachers likely have a desire for the students to act on the values or value sets emerging from a given content area. Affective learning is a construct that allows teachers to verify that indeed they have inspired their students and possibly evolved their students, though teachers rarely have the opportunity to see the long-term effects associated with their teaching.

The time has come for definitions of affective learning in instructional communication to evolve. A more evolved definition will acknowledge changes in the student

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value set and subsequent behavioral changes. In other words, communication scholars must begin to define affective learning in terms of internalized values that will be applied outside of the learning environment over an extended period of time. The value of the instructional communication area would be significantly increased if scholars are able to demonstrate that instructional communication variables lead to long-term changes in students. Thus, we propose the following definition of affective learning as an extension of the definitions put forth by Kearney, Plax, and Wendt-Wasco (1985) and Krathwohl et al. (1964). Affective learning refers to an individual's positive disposition toward a particular subject matter, which changes an individual's operational framework and value system thus guiding decision making and behavioral choices in all aspects of life.

How Should We Measure Affective Learning in Instructional Communication Research?

Affective learning should be viewed as multidimensional with a series of measures that tackle various aspects of the construct. As communication scholars, we must begin to measure the internal value changes that persist long after the learning event occurs. We agree that current measures of affective learning are well suited to measuring our current conceptualization of affective learning. However, our measures and methodologies do not account for Krathwohl et al.'s dimension of affective learning referred to as "characterization of internal values or value sets" (or Kearney et al.'s, 1985 internalization). We believe that a measure must be developed to examine the larger, more value-driven themes discussed by Krathwohl et al. (1964).

We generally think of (and measure in research studies) how affective learning exists at a single point in time that is concurrent with the learning event. As scholars, we must challenge ourselves to measure affective learning over the course of a lifetime and to measure how pervasive the subject matter is within an individual's operational framework and internal value system. Communication researchers must now shift their approaches to study affective learning at various points in time *after* the learning event occurs. More specifically, we need to begin to understand whether known correlates of the aspects of affective learning that are currently measured (levels 2 and 3) such as teacher immediacy, clarity and credibility lead to internalized values that are applied outside of the classroom over an extended period of time.

The design of the proposed method must necessarily rely on participant recall, but we would argue that participant recall is a strength in the proposed measurement strategy, as it indicates true internalization. To measure this more sophisticated level of affective learning, scholars may ask participants to recall a course taught by a teacher with whom they felt psychologically close (immediacy) or whose content was particularly clear (clarity). We would propose that the length of time from the learning event could range from months to years. In keeping with current measurement trends, participants will be asked to report on multiple dimensions of affective learning (affect toward content, affect toward behaviors recommended in the course, and affect toward instructor). In addition, and great emphasis is placed on

this addition, communication scholars must measure affective learning in relation to whether course content has been incorporated into an individual's operational framework and value system as indicated by decisions grounded in the course content and behavioral choices that are driven by the content.

The following example is proposed. Participants may recall a professor of nonverbal communication who was immediate and clear. If the professor achieved affective learning, then theoretically students should have incorporated knowledge of the effects of perceived attractiveness into their value set and will use this knowledge in raising children (teaching children about accepting differences in appearance), relationships in the workplace (evaluating subordinates objectively regardless of appearance), decisions in the workplace (hiring practices), interpersonal relationships (accepting weight gain in peers), etc. In other words, we must ask: is the former student's behavior outside of the classroom guided by content learned affectively, and for how long? If affective learning is truly about internalization then affectively learned content should impact multiple aspects of an individual's life, over time, and thus must be measured in these terms.

References

Kearney, P., Plax, T. G., & Wendt-Wasco, N. J. (1985). Teacher immediacy for affective learning in divergent college classes. *Communication Quarterly*, *33*, 61–74. doi:10.1080/01463378509369579

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives: Handbook II: Affective domain*. New York, NY: David McKay.

McCroskey, J. C. (1994). Assessment of affect toward communication and affect toward instruction in communication. In S. Morreale & M. Brooks (Eds.), *1994 SCA summer conference proceedings and prepared remarks: Assessing college student competence in speech communication* (pp. 56–68). Annandale, VA: Speech Communication Association.

Messman, S. J., & Jones-Corley, J. (2001). Effects of communication environment, immediacy, and communication apprehension on cognitive affective learning. *Communication Monographs*, *68*, 184–200. doi:10.1080/03637750128054

Reclaiming affective learning

Amy L. Housley Gaffney & Deanna P. Dannels

For teachers and scholars in academia, a good day is often measured by what we know and how we share what we know. Yet, education has changed. And, as argued

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elsewhere, we lose an opportunity if we remain solely and narrowly focused only on what we know and, furthermore, what our students know: namely, cognitive learning (e.g., Dannels et al., 2014). Overreliance on cognitive outcomes limits our ability to truly understand students' learning, and education scholars have taken notice:

> The affective domain may be equal to, if not more important, than the cognitive domain. When the affective domain is subordinated to the cognitive domain, the outcomes may fall short of the needs of the student. Gaining knowledge *is* important in school, however, the acquisition and development of feelings, values, and beliefs are equally important … . Since affective objectives are typically long term, and more difficult to measure than cognitive objectives, they tend to receive less emphasis in the curriculum. (Hauenstein, 1998, p. 59, emphasis in original)

Although instructional communication scholars have not neglected affective learning, contemporary conversations in higher education focusing on new, desired affective outcomes (e.g., resilience) have awakened new possibilities for exploration (Duckworth & Gross, 2014; Shechtman, DeBarger, Dornsife, Rosier, & Yarnall, 2013). Thus, the time is right for instructional communication scholars to refocus on—and reimagine—affective learning.

For decades, instructional communication research has conceptualized affective learning in terms of the extent to which students like content or subject matter, an approach that has generated some critique:

> The instruments currently used to measure affect toward subject matter … were not developed specifically for that purpose. Rather, they were simply adapted from earlier work designed to measure other attitudes. Consequently, these operational definitions of affective learning are not fully isomorphic with the constituent definitions advanced in the educational literature. (Mottet & Richmond, 1998, p. 371)

Based on this critique, Mottet and Richmond expanded the definition of affective learning to a broader set of concepts, such as the likelihood of recalling and using relevant information from the course. However, their additions only scratch the surface of the breadth of affective learning constructs; a more robust approach for consideration is grounded in education literature.

The Krathwohl, Bloom, and Masia (1964) taxonomy of affective learning provides multiple levels. Much as students at the foundational level of cognitive learning can recognize and retrieve knowledge, affective learning begins with an awareness of ideas (receiving). Those ideas are then responded to and certain ideas are valued. The fourth component, organization, involves relating the touted values to those already held, while the final level, characterization, is to act consistently in accordance with the internalized values.

In returning to education-based definitions of affective learning, we need to think both theoretically and pedagogically on (1) how to articulate student learning outcomes involving affect, (2) how to structure courses and engage in interactions such that these learning outcomes are met and (3) how to measure and assess the affective learning outcomes. To explain how these steps may play out, we take up the third level of affective learning: valuing. This level of affective learning focuses on the worth or value placed upon a behavior or concept.

Returning to the more historically grounded conceptualization of affective learning as a constellation of attitudes demonstrated by behaviors provides more—and more robust—opportunities to both impact students and measure learning. For example, imagine a course focused on small group communication. Using the traditional instructional communication approach would tell us the extent to which students felt the content about small group communication was bad/good, valuable/worthless, etc. as well as the students' likelihood of taking another course in small group communication. A more fruitful learning outcome for this course might sound like *students will assume responsibility for the functioning of a small, task-specific group (to which they belong).* This outcome is tied specifically to a course and to specific instances (e.g., when working with a group on a specific task). While there are certainly behavioral elements to the outcome, the heart of this outcome is for students to demonstrate a commitment to the principles of effective group work, displayed through taking responsibility. In demonstrating commitment to having a functioning group, students also demonstrate that they value each group member presuming responsibility.

The course materials and activities that deal with this outcome, then, may certainly have cognitive elements (e.g., students learning to define an effective group) and would also include behavioral elements (e.g., students' actual behaviors). To focus on the affective outcome of valuing, instructors and students could discuss the benefits of groups and of having committed group members. Students could actively participate in simulations to experience both effective and ineffective groups. Measuring the outcomes is more complicated than the traditional instructional communication approach would make it seem. Rather than asking students how positively they feel about the course content, an appropriate measure would ask students the extent to which they value the specific skills advocated in the course. A direct assessment of student behavior would be an observation of students as they engage in a group simulation to identify over behaviors indicative of assuming responsibility for the functioning. The assessment would need to identify levels of success in order to evaluate students' attainment. Ideally, affective learning could also be measured longitudinally by following up with students as they complete group tasks in a later class, with a similar observation of behaviors.

Viewing "affective learning," as a valued, significant educational outcome on par with cognitive learning could lead to a more robust understanding of how we, as teachers, can make a lasting difference in our students. In short, perhaps sophisticated and thoughtful attention to affective learning could—instead of only teaching students what to know—teach students how to recognize, be aware of, respond to, value and enact with the world around them. That, we believe, would be a good day's work.

References

Dannels, D. P., Darling, A., Fassett, D. L., Kerssen-Griep, J., Lane, D., Mottet, T. P., … Sellnow, D. (2014). Inception: Beginning a new conversation about communication pedagogy and scholarship. *Communication Education*, *63*, 366–382. doi:10.1080/03634523.2014.934849

Duckworth, A. L., & Gross, J. J. (2014). Self-control and grit: Related but separable determinants of success. *Current Directions in Psychological Science, 23*, 319–325.

Hauenstein, A. D. (1998). *A conceptual framework for educational objectives: A holistic approach to traditional taxonomies*. Lanham, MD: University Press of America.

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, NY: David McKay.

Mottet, T. P., & Richmond, V. P. (1998). Newer is not necessarily better a reexamination of affective learning measurement. *Communication Research Reports*, *15*, 370–378. doi:10.1080/08824099809362136

Shechtman, N., DeBarger, A. H., Dornsife, C., Rosier, S., & Yarnall, L. (2013). *Promoting grit, tenacity, and perseverance: Critical factors for success in the 21st century*. Washington, DC: U.S. Department of Education.

Students' Affective Learning as Affective Experience: Significance, Reconceptualization, and Future Directions

San Bolkan

Affective learning is often measured using some form of the assessment first published by Scott and Wheeless (1977) which used bipolar adjectives such as *good/bad* and *valuable/worthless* to assess attitudes toward instructional strategies. Though these authors originally described their measures as assessing general attitudes toward specific areas of instruction, the bipolar adjectives have since been co-opted to measure attitudes toward a course and an instructor in order to represent the more specific notion of affective learning (e.g., Andersen, 1979; Kearney, Plax, & Wendt-Wasco, 1985; McCroskey, Richmond, Plax, & Kearney, 1985). In this volume, there will no doubt be several calls to align the measurement of affective learning more closely with its conceptual definition (Krathwohl, Bloom, & Masia, 1964) and thus I will not do so here. Instead, I want to use the space provided to make an argument for the utility and continued use of the current form of assessment, which may be more accurately described as capturing students' *affective experience* (e.g., liking, satisfaction, contentment).

There is reason to believe that students' affective experiences are of value to the discipline, and we should be careful not to discount the importance of this construct in

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the classroom. This is because positive affect has been shown to be an important aspect of educational environments and is linked to a host of important outcomes such as students' intrinsic motivation, effort, cognitive elaboration, self-regulation, and grade-point averages (Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011). In fact, scholars from educational psychology place such a high importance on affect that they have developed the cognitive-affective theory of learning with media (CATLM; Moreno, 2006). This theory states that positive affective experiences are important in the classroom insofar as they serve as motivational factors that mediate learning through the facilitation of cognitive engagement (Moreno & Mayer, 2007).

Many instructional communication researchers would agree about the importance of students' affective experiences in the classroom and argue that these experiences may be the central mediator linking teaching behaviors to student reports of learning and other important classroom outcomes. For instance, in their study of nonverbal immediacy and perceived cognitive learning, Rodriguez, Plax, and Kearney (1996) found that students' affective experiences were the central causal mediator of this relationship. In addition, Bolkan and Goodboy (2015) found that humorous teachers who influence students' positive affect also fulfill students' basic needs. Fulfilling students' basics needs, in turn, was found to promote perceived cognitive learning. According to the authors, when instructors build a positive climate for students by promoting positive affective experiences, they foster genuine enthusiasm for learning, which leads to behaviors that ultimately "increase students' chances for being successful in their courses" (p. 58). Conversely, researchers have found that when instructors misbehave, they create a negative classroom climate that leads to reduced student performance (Goodboy & Bolkan, 2009). Specifically, Goodboy and Bolkan found that misbehaving teachers decimate students' experiences of positive affect, which subsequently reduces their reports of motivation, perceived cognitive learning, and participation.

It should be clear then that students' affective experiences in the classroom impact their subsequent behaviors, perceptions, and outcomes in important ways. Thus, despite not measuring affective learning itself, the assessment of students' affective experiences serves to operationalize an important variable for investigation. It has consistently been shown to be a central mediating factor in a variety of studies, and its ability to bridge instructors' behaviors and students' outcomes should not be ignored or forgotten. Having said all of the above, if instructional scholars continue using the measure, the most appropriate way to move forward may be to rename the construct to reduce the emphasis on learning. As I have argued already, calling the construct *affective experience* may more closely match what students mean to report when responding to current measures of affective learning, and this term may also more closely match the earliest conceptual definition of the construct proposed by the original researchers.

Still, if we are to continue measuring students' affective experiences as we currently do, there are issues to consider. First, McCroskey (1994) argues that the subscales should not be combined into a composite measure, but should instead be used separately. This is because students' experiences related to course content, instructors, and behaviors recommended in the course (for example) are sufficiently different to

warrant separate investigation; combining them creates a problem of interpretability. Scholars should take care to keep these constructs separate, and this can be achieved if reviewers and editors agree to discourage the combination of subscales. Alternatively, if scholars want to collect data pertaining to all of the subscales, and/or if they believe the variables should be related, using structural regression modeling with first- and second-order latent variables could help make a case for their positions.

The second issue to consider includes the specification of students' positive affective experiences. The measure currently being used appears, at face value, to tap into students' experiences of liking, satisfaction, and contentment. However, it could be the case that students' affective experiences better reflect enjoyment, amusement, a lack of boredom, or something else altogether. Thus, researchers should be aware that the current measure of students' affective experiences is general in nature, and a more specific understanding of how these experiences function in classroom contexts may be warranted. In fact, research on emotions in educational contexts supports this conclusion (see Pekrun & Linnenbrink-Garcia, 2014).

In conclusion, there are, admittedly, issues with the current measure of affective learning. However, as we develop better ways to operationalize the concept, it is important that we do not forget or ignore the importance of students' affective experiences in the classroom. Though a makeover for the measure for affective learning is certainly warranted, assessing students' affective experiences in the classroom will no doubt remain an important part of instructional communication into the future.

References

Andersen, J. F. (1979). Teacher immediacy as a predictor of teaching effectiveness. In D. Nimmo (Ed.), *Communication yearbook 3* (pp. 543–559). New Brunswick, NJ: Transaction Books.

Bolkan, S., & Goodboy, A. K. (2015). Exploratory theoretical tests of the instructor humor- student learning link. *Communication Education*, *64*, 45–64. doi:10.1080/03634523.2014.978793

Goodboy, A. K., & Bolkan, S. (2009). College teacher misbehaviors: Direct and indirect effects on student communication behavior and traditional learning outcomes. *Western Journal of Communication*, *73*, 204–219. doi:10.1080/10570310902856089

Kearney, P., Plax, T. G., & Wendt-Wasco, N. J. (1985). Teacher immediacy for affective learning in divergent classes. *Communication Quarterly*, *33*, 61–74. doi:10.1080/01463378509369579

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives. Handbook II: Affective domain.* New York, NY: David McKay.

McCroskey, J. C. (1994). Assessment of affect toward communication and affect toward instruction in communication. In S. Morreale & M. Brooks (Eds.), *1994 SCA summer conference proceedings and prepared remarks: Assessing college student competence in speech communication.* Annandale, VA: Speech Communication Association.

McCroskey, J. C., Richmond, V. P., Plax, T. G., & Kearney, P. (1985). Power in the classroom V: Behavior alteration techniques, communication training and learning. *Communication Education*, *34*, 214–226. doi:10.1080/03634528509378609

Moreno, R. (2006). Does the modality principle hold for different media? A test of the method-affects-learning hypothesis. *Journal of Computer Assisted Learning*, *22*, 149–158. doi:10.1111/j.1365-2729.2006.00170.x

Moreno, R., & Mayer, R. (2007). Interactive multimodal learning environments. *Educational Psychology Review*, *19*, 309–326. doi:10.1007/s10648-007-9047-2

Pekrun, R., Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring emotions in students' learning and performance: The achievement emotions questionnaire (AEQ). *Contemporary Educational Psychology*, *36*, 36–48. doi:10.1016/j.cedpsych.2010.10.002

Pekrun, R., & Linnenbrink-Garcia, L. (Eds.). (2014). *International handbook of emotions in education*. New York: Routledge.

Rodriguez, J. I., Plax, T. G., & Kearney, P. (1996). Clarifying the relationship between teacher nonverbal immediacy and student cognitive learning: Affective learning as the central causal mediator. *Communication Education*, *45*, 293–305. doi:10.1080/03634529609379059

Scott, M. D., & Wheeless, L. R. (1977). Communication apprehension, student attitudes, and levels of satisfaction. *Western Journal of Speech Communication*, *41*, 188–198. doi:10.1080/10570317709389611

Pursuing and Measuring Affective Learning Objectives

Paul L. Witt

I was introduced to affective learning by my graduate advisor and mentor, Lawrence Wheeless. We grounded our conceptual understanding in Bloom's taxonomy (Bloom, 1956; Krathwohl, Bloom, & Masia, 1964) and operationalized the construct using iterations of the Scott and Wheeless (1977) affective learning scale. In subsequent decades, however, instructional communication theory and methods have evolved considerably, and today I welcome the challenge presented by this forum to turn a thoughtful and discerning eye on the construct of affective learning.

In the Communication discipline we focus on *people*—their attitudes, motives, and communicative actions. We teach theories and practices that bring benefits to individuals, groups, and society as a whole. Thweatt and Wrench correctly assert in their position paper that we believe our teaching has long-term effects on the value structures and behavioral choices of our students. That lasting internalization of disciplinary content has been termed *affective learning*, an instructional objective that extends well beyond the mere transfer of academic information from teacher to student. This forum raises the crucial question, "How do we know whether we are achieving this ambitious goal?"

When we ask students to rate the course and instructor as *good/bad, worthless/valuable, fair/unfair,* and *positive/negative*, we get only a hint at progress toward the goal. Though Myers and Goodboy's criticism of this methodology may sound extreme to some readers, they are justified in concluding that affective learning scales derived from the Scott and Wheeless measure do not meet today's standards of valid and reliable measurement of long-term internalization of values, attitudes, and communicative actions presented in our courses. Scholars generally agree that

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research findings are no more accurate, credible, or meaningful than the data on which they are based. Weak measurement produces weak results.

In addition to persistent doubts about instrumentation, we have reason to question the theoretical integrity of some admittedly simplistic affective learning research. In reaction, Thweatt and Wrench suggest that longitudinal measurement is required to evaluate learning across our students' lifetime, a notion that is theoretically sound but may be practically unattainable. How shall we maintain contact with students after they leave campus, and how shall we accurately identify specific attitudes and internalizations we wish to track, and how shall we collect valid data that reveal the extent to which those recommended actions have been applied in postuniversity life? The challenges seem overwhelming.

Alternatively, Myers and Goodboy suggest a pretest/posttest approach to obtain change scores in response to instruction received over a period of time. Provided that a reliable and valid data collection instrument is employed, this design is more manageable and might be useful as first-year students enter the communication program and again as they exit at graduation. Such an analysis would provide instructors with valid indications of the (predicted) long-term effects of their teaching. In addition, this approach would provide assessment officers with empirical evidence of growth in values, attitudes, skills, and behavioral intentions acquired during the student's time in the communication program.

A shift to longer-term research designs is theoretically sound but of limited use in the absence of a good affective learning measure. Thus, the needle on our compass swings back to *valid measurement.* If only we had an instrument or series of instruments that would yield credible data for each of the five factors in Krathwohl et al.'s classification scheme: receive, respond, value, organize, characterize. I concur with the authors in this forum that it is time to develop such a measure. To achieve this important goal, our best scholars should invite discriminating colleagues in the fields of Education and Educational Psychology to join with us in creating a theoretically defensible measure of affective learning. Cross-disciplinary collaboration will produce a more widely used instrument of significant value to all scholars interested in teaching and learning, and it may enhance the stature of Communication among the social science disciplines. The instructional communication research area has matured, our leading scholars are capable, we have scholarly alliances with other disciplines, and we know how to use refined methods of instrument development. There is nothing holding us back from meeting this challenge and providing the academy with a respectable instrument—but let us make haste slowly. It is crucial that this effort produce a measure of unassailable quality if it is to provide the breakthrough we all desire.

Amid the calls in this forum for more accurate measurement, Bolkan alone takes the courageous position of defending previous research findings. Bravo, San! Current measures of affective learning (or affective experience) have, indeed, enabled scholars to identify some useful and important associations with immediacy, clarity, humor, motivation, grades, and a host of other instructional communication variables. Perhaps it is not exactly the Krathwohl affective learning construct we have identified, but we have detected something meaningful going on in our classroom interactions. If

we are now able to progress toward more accurate, theoretically based observations, we must not forget the decades of work that brought us to this place of greater understanding. Though it is trite to say, the young scholars of today can see clearly into the future only because they are standing on the shoulders of Scott and Wheeless and the generation of scholars who followed.

Until a new instrument emerges, what do we make of Bolkan's suggestion to rename the current measure? There is something of a precedent for such a decision, as many researchers took McCroskey's recommendation in the 1990s and stopped describing the measure as *affective learning* in favor of *affect for teacher* and *affect for course*. If today's scholars are aware of the theoretical and methodological inconsistencies described in this forum, they are likely to use more careful language when writing their research reports and might even choose to rename the variable or measure as *affective experience*. However, changing the label might produce some confusion and lack of consistency among research articles, so it remains to be seen whether the notion gains widespread acceptance across the instructional communication research area.

This forum has given me opportunity to think in new ways about my own teaching philosophy, pedagogical methods, and the impact I am having on my students. Like Gaffney and Dannels, I search for direct connections between theoretical ideas and everyday classroom communication. For example, every semester, I teach a required theory class for undergraduate communication majors. Many of them think the course will be abstract and boring, so I work hard to convince them of the educational and practical value of studying theory. In fact, I spend as much time demonstrating the relevance and usefulness of theory as I do explaining what various theories have taught us. Until I read the papers in this forum, it had not occurred to me that I was intuitively following Krathwohl et al.'s hierarchy of affective learning objectives. My instructional strategy is to convince students to pay attention (receive), think deeply about the theory (respond), acknowledge its importance (value), connect the theory with what they already know about communication (organize), and apply what the theory has taught them by incorporating it into their communication skill set (characterize). Unconsciously, intuitively, I have been pursuing affective learning objectives in the theory class. It is true that, today, we have no measure that generates empirical data to support that assertion, but perhaps that will change someday soon. In the mean time, a lack in adequate instrumentation should not deter us from assiduously pursuing these worthwhile instructional goals.

Achieving them is more important than measuring them.

References

Bloom, B. S. (1956). *Taxonomy of educational objectives. Handbook I: Cognitive domain*. New York, NY: David McKay.

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

Scott, M. D., & Wheeless, L. R. (1977). Communication apprehension, student attitudes, and levels of satisfaction. *Western Journal of Speech Communication*, *41*, 188–198. doi:10.1080/10570317709389611

Affective Learning from a Cognitive Neuroscientific Perspective

Timothy P. Mottet

With our increasing interest in how emotions and learning are interrelated and the volumes of new research being generated from the fields of affective science and cognitive neuroscience, it is time for instructional communication researchers to again revisit the construct and measurement of affective learning.

After reading and reflecting on the essays that are a part of this special forum on affective learning, I was reminded of how important the work of Benjamin Bloom, David Krathwohl, and Bertram Masia has been on how we think about, study, and measure affective learning. In response to these essays, I would like to raise an issue that was largely missing from the discussion, and which needs to be part of this conversation—whether we have become too dependent on this body of work as the foundation for this particular construct in the 21st century.

Bloom "initiated the idea of the learning taxonomies hoping that it would reduce the labor of preparing annual comprehensive examinations" (Krathwohl, 2002, p. 212). He saw the original taxonomy serving three main purposes: providing a common language about learning goals, guiding curriculum developers to ensure that a particular course was meeting national, state, and/or regional educational standards, and helping teachers align their courses ensuring effective instructional design where learning outcomes, assignments, and examinations were aligned (Krathwohl). Although the Taxonomy of Educational Objectives has informed learning, Bloom's original intent was to inform curriculum and instruction by providing a framework for developing educational objectives in three domains: cognitive, behavioral, and affective.

Learning, whether cognitive, behavioral, or affective, begins as a function of cognition and brain processing. I would encourage researchers interested in refining the conceptualization and operationalization of affective learning to complement Bloom and his colleagues work with new theory and research from the field of cognitive neuroscience. After a brief perusal of the literature, one will quickly learn how cognitive and affective learning are so closely connected and interdependent that separating them is an artificial bifurcation that is no longer theoretically valid or empirically supported. Similar to the neuro-myth of right-brain and left-brain learning, researchers today strongly suggest that cognition and emotion are "two sides of the same coin," and most of the thought processes that educators care about, including memory, learning, and creativity among others, critically involve both cognitions and emotions, which are highly interrelated (Fisher & Bidell, 2006; Immordino-Yang & Damasio, 2007).

The field of cognitive neuroscience has exploded during the past two decades as a result of a number of new neuroimaging tools that have become available to

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researchers. Rather than assuming learning has occurred by observing behavior or asking for self-reports of learning, researchers, today, put subjects through a series of experiments and then observe brain scans in real time to see how learning occurs. Rather than using educational or cognitive psychological theories to explain learning, researchers are using cognitive neuro-scientific theory to explain, predict, and control learning.

According to Immordino-Yang and Damasio (2007), learning occurs when we "tag emotions" to the information we are acquiring or developing. In the classroom, teachers are typically responsible for helping students with this tagging process. Brain-injured individuals have allowed educators to see the complexities of learning and how learning is a function of a number of affective and cognitive neurological systems working together. Immordino-Yang and Damasio argued that:

> knowledge and reasoning divorced from emotions and learning lack meaning and motivation and are of little use in the real world. Simply having the knowledge does not imply that a student will be able to use it advantageously outside of school (p. 5).

Cognitive neuroscientists want to understand better how students' emotional states impact moment-to-moment problem solving. Immordino-Yang and Damasio (2007) consider emotions to function like a rudder on a boat. Emotions as a rudder steers learners' thinking, in effect helping them retrieve information and memories that may be relevant to solving a particular problem. For example, as a student solves a math problem, she is emotionally evaluating whether each cognitive step is likely to bring her closer to a solution. If the cognitive steps appear to be advancing her goals, she simultaneously experiences positively valenced emotions, which reinforces cognitions. If the cognitive steps are leading her astray, she experiences negatively valenced emotions, which may flood cognitions slowing down or halting the cognition needed to solve the problem.

Our existing measures of cognitive and affective learning and how we administer these measures assume that these two learning processes are related, but do not function together as a single learning process. Emotions comprise cognitive processes while aspects of cognition (attention, memory) are both affected by emotion and subsumed within the process of emotion (Immordino-Yang & Damasio, 2007). Therefore, new measures of learning should capture cognitive and emotional processes involved in learning as well as how they interact to impact and are impacted by learning.

There is a growing number of "neuro-educators" who specialize in making cognitive neuro-science theory and research accessible and useful to those who need this research, such as Harvard University's International, Mind, Brain, and Learning Society (http://www.imbes.org/). This professional association, which holds annual conferences and publishes a monthly journal, comprises educators and researchers, at all levels of education, who are interested in learning more about the cognitive neuroscience of learning.

From my perspective, the hard work is still ahead of us. Below is a short list of recommendations that I would ask instructional communication researchers to consider as they pursue affective learning:

1. Become a member of a professional learning association that explores learning from a cognitive neuroscientific perspective.
2. Develop relationships with researchers interested in learning who also have access to neuroimaging resources. Together, develop a research agenda that is mutually beneficial.
3. Conceptualize and operationalize learning from a neuroscientific perspective where cognitions and emotions work together to yield learning. One way to do this may be to further explore Immordino-Yang and Damasio's (2007) construct of "emotional thought" (p. 7).
4. Validate existing cognitive and affective learning measurements using cognitive neuroscientific theory.

In summary, I thank the authors for their reexamination of affective learning and measurement and for reminding us of how Bloom's *Taxonomy of Educational Objectives* has significantly impacted our thinking and measurement of affective learning. As we advance our understanding of learning, it is time to complement Bloom's work with new theory and research from the field of cognitive neuroscience where learning is a complex functioning of both cognitive and emotional processes.

References

Fisher, K. W., & Bidell, T. (2006). Dynamic development of action and thought. In W. Damon & R. Lerner (Eds.), *Handbook of child psychology, Vol. 1: Theoretical models of human development* (6th ed., pp. 313–399). Hoboken, NJ: John Wiley & Sons.

Immordino-Yang, M. H., & Damasio, A. R. (2007). We feel therefore we learn: The relevance of affective and social neuroscience to education. *Mind, Brain, and Education*, *1*(1), 3–10. doi:10.1111/j.1751-228X.2007.00004.x

Krathwohl, D. R. (2002). A revision of bloom's taxonomy: An overview. *Theory into Practice*, *41*, 212–218. doi:10.1207/s15430421tip4104_2

The Instructional Communication Affective Learning Paradox

Derek R. Lane

There is a curious paradox that no one can explain.

Who understands the secret of the reaping of the grain?

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Who understands why spring is born out of winter's laboring pain?

Or why we all must die a bit before we grow again.

I do not know the answer; I merely know it's true.

The Fantasticks (lyrics by Tom Jones)

How is it possible that after more than four decades of thoughtful instructional communication scholarship, our discipline continues to advance relatively incomplete knowledge claims associated with the affective learning construct? The affective learning paradox, as explicated in this essay, may be difficult to explain, but the common themes and related insights should allow us to grow as a discipline if we are open-minded in our approach to understanding the paradox and if we are willing to conceptually disentangle affective learning from other related constructs (e.g., student affective experiences, satisfaction, attitudes, etc.). A series of recent studies, published by political scientists, provides evidence that strongly held incorrect beliefs cannot be changed simply by disputing facts, and any idea that contradicts knowledge claims that have long been held as important can result in problems where, despite correction attempts, presenting hardline denialists with the facts just makes them dig their heels in deeper (Nyhan & Reifler, 2015; Nyhan, Reifler, Richey, & Freed, 2014). The current essay advances our conversation about important long-held beliefs by reflecting on four common themes inherent in the affective learning paradox. The first major theme relates to conceptual and theoretical confusion concerning the affective learning domain as advanced by instructional communication researchers.

Conceptual and Theoretical Confusion

Learning is (or should be) the central characteristic of any instructional communication theory or research program (Clark, 2002). While there is no commonly agreed upon conceptual definition of learning, educational theorists and psychologists typically characterize learning as a *complex process* (multidimensional) that requires *effort*, is frequently *delayed*, is *contextual*, and occurs only when relatively *permanent changes in behavior* result from reinforced practice (Olson & Hergenhahn, 2013). The conceptual confusion that contributes to the affective learning paradox occurs when communication researchers: (1) decontextualize learning, (2) use conceptual idiosyncratic language that is at odds with lay usage and usage throughout the broader scholarship of education (Sprague, 2002), and (3) fail to focus on the specific *changes* (e.g., changes in values associated with freedom of expression or changes in student values about assuming responsibility in a group) that we expect to result from exposure to effective instructional messages. Put simply, learning is contextual and requires that we measure changes in how students feel, think, or act. Affective learning, by extension, occurs when a student acquires, reinforces, or modifies their values, preferences, or attitudes associated with the affective learning domain.

Taken together the essays included in this forum describe a general consensus to use the taxonomy originally developed by Bloom and his colleagues to distinguish the affective learning domain (changes in feelings and values) from the cognitive (changes in thinking and knowledge acquisition) and psychomotor (changes in behavior and skill acquisition) domains of learning (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956; Krathwohl, Bloom, & Masia, 1964). Nevertheless, a cursory review of the instructional communication research published in the past two decades that focus on affective learning generally demonstrates an omnipresent lack of conceptual and theoretical clarity about how and why student values and feelings will change in response to instructional message exposure. Most studies are consistent with Waldeck, Plax, and Kearney's (2010) observation that conceptualizes affective learning as "students' internalization of positive liking toward instructional content or subject matter." While technically accurate, the definition does not sufficiently capture the theoretical and conceptual nuances of the hierarchical structure for categorizing student affective learning responses originally described by Krathwohl et al. (1964). One notable exception is the research published by Mottet and his colleagues that applies affective learning theory consistent with the original Krathwohl et al. taxonomy and identifies predictors of affective learning in ninth-grade math and science classes (Mottet et al., 2008) and ninth-grade writing conferences (Martin & Mottet, 2011).

The conceptual and theoretical confusion that propagates the affective learning paradox is further exacerbated when we continue to describe and apply communication concepts that are, "at odds with usage throughout the broader scholarship of education" (Sprague, 2002, p. 346). We have the opportunity to enhance conceptual clarity and advance sophisticated theories about affective learning only when we consider and capture the complexity of affective learning in specific instructional contexts. Another common theme inherent in the affective learning paradox is the lack of content validity and poor conceptual fit of existing measures.

Content Validity and Poor Conceptual Fit of Existing Measures

The inherent consequences associated with conceptual and theoretical confusion has also increased complications related to capturing the observable and measurable characteristics with existing affective learning measures. There are several strategies recommended by forum participants that could serve to increase the content validity and conceptual fit of existing affective learning measures, but that we would likely benefit most by developing new measures that are increasingly sensitive to the affective learning domain and related hierarchical taxonomy originally proposed by Krathwohl et al. (1964).

For example, Myers and Goodboy provide specific recommendations related to the development of a new measure of affective learning that are consistent with proposals offered by other forum participants. Their suggestions run parallel with the call from Gaffney and Dannels to reimagine affective learning as a constellation of values associated with those described by Krathwohl et al. (1964) in the third level of their affective responses hierarchy. Thweatt and Wrench advance convincing arguments for

operationalizing affective learning as a sophisticated multidimensional construct (based in testable theory) that requires repeated-measures experimental designs to assess persistent internalized values or value-set changes. Bolkan's recommendation to reconceptualize affective learning as *affective experience* may serve to increase the conceptual fit between the commonly accepted measure of affective learning (Mottet & Richmond, 1998) and the construct he capably argues is actually being measured by the existing scale. Such a strategy would fail to provide a measure of affective learning, but it does remind researchers of the important role affect plays in the classroom, even though affect itself is not the same as affective learning.

We have an obligation to continue to develop reliable and valid multidimensional self-report measures that are tied to specific course-related affective goals, but we must be equally committed to moving beyond survey research designs to integrate additional assessments of student behavior that include qualitative observations as *direct* indicators of student affective learning. The third common theme relates to the integration of the affective learning domain with the cognitive and psychomotor learning domains.

Integration of Affective Learning with Other Learning Domains

The affective learning paradox is especially pronounced in the persuasive arguments advanced by Gaffney and Dannels when they describe the potential relationships among the affective, cognitive, and psychomotor learning domains. There is little doubt that instructional messages have facilitated both constructive and detrimental impacts on student learning. Regrettably, the conceptual confusion and lack of specificity in the measurement of *changes* in student learning have prevented us from clearly articulating how specific elements of instructional messages function to enhance or impede actual student learning. Likewise, the lack of convincing evidence allowing us to advance knowledge claims related to sophisticated instructional communication learning theories also prevents us from explaining how learning in the affective domain might predict learning in the cognitive or psychomotor domains. Formative research focused on instructional messages in specific contexts that explore the interaction and integration of affective learning with the other learning domains undoubtedly warrants researchers' attention. The final common theme associated with the affective learning paradox relates to new opportunities for exploration and expansion.

New Opportunities for Exploration and Expansion

To enhance its value for both instructional communication theory and practice, research on affective learning must not only strive for methodological improvements but also include expansion into new areas. We are an established group of scholars within a specialized communication subdiscipline who have advanced knowledge claims about instructional communication that are published in high profile journals. Now is the time to move beyond our reliance on minor modifications to theories developed by researchers in other disciplines (i.e., education, psychology, sociology)

and other communication subdisciplines (e.g., health, interpersonal, organizational communication) and begin exploring opportunities to develop distinctive instructional communication theories that explain why and predict how characteristics of instructional messages and curriculum can positively impact student (affective) learning.

We have the opportunity to triangulate research methods to test and refine instructional message theories that explain and ultimately predict student transformational learning related to each of the three domains of learning. We all have much to gain in our collaboration to improve our theoretical models that include affective learning—a lesson we can learn from Anderson and Krathwohl (2001) who revised and improved the original version of Bloom's taxonomy in 2001. Moreover, if we continue to incorporate advanced quantitative statistical modeling techniques (i.e., hierarchical linear modeling and structural equation modeling) that use nested designs to test our instructional theories, we will be more confident in our results as we reduce random error as well as violations associated with assumptions of independence that frequently occur when we aggregate data across multiple instructors, types of courses, and class times.

The affective learning paradox is indeed curious and difficult to explain, but the reflections and insights contained in this forum serve to advance our conversation as we consider four common themes: (1) conceptual and theoretical confusion, (2) content validity and poor conceptual fit of existing measures, (3) integration of affective learning with other learning domains, and (4) new opportunities for exploration and expansion of affective learning theory and research. May we all remain willing to accept the challenge to overcome the affective learning paradox.

References

Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York, NY: Longman.

Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (Eds.). (1956). *Taxonomy of educational objectives. The classification of educational goals, Handbook I: Cognitive domain*. New York, NY: David McKay.

Clark, R. A. (2002). Learning outcomes: The bottom line. *Communication Education*, *51*, 396–404. doi:10.1080/03634520216531

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

Martin, L., & Mottet, T. P. (2011). The effect of instructor nonverbal immediacy behaviors and feedback sensitivity on Hispanic students' affective learning outcomes in ninth-grade writing conferences. *Communication Education*, *60*, 1–19.

Mottet, T. P., Garza, R., Beebe, S. A., Houser, M. L., Jurrells, S., & Furler, L. (2008). Instructional communication predictors of ninth-grade students' affective learning in math and science. *Communication Education*, *57*, 333–355. doi:10.1080/03634520801989950

Mottet, T. P., & Richmond, V. P. (1998). Newer is not necessarily better: A reexamination of affective learning measurement. *Communication Research Reports*, *15*, 370–378. doi:10.1080/08824099809362136

Nyhan, B., & Reifler, J. (2015). Does correcting myths about the flu vaccine work? An experimental evaluation of the effects of corrective information. *Vaccine*, *33*, 459–464. doi:10.1016/j.vaccine.2014.11.017

Nyhan, B., Reifler, J., Richey, S., & Freed, G. L. (2014). Effective messages in vaccine promotion: A randomized trial. *Pediatrics*, *133*, 1–8. doi:10.1542/peds.2013-2365

Olson, M. H., & Hergenhahn, B. R. (2013). *An introduction to theories of learning* (9th ed.). Upper Saddle River, NJ: Pearson.

Sprague, J. (2002). Communication education: The spiral continues. *Communication Education*, *51*, 337–354. doi:10.1080/03634520216532

Waldeck, J. H., Plax, T. G., & Kearney, P. (2010). Philosophical and methodological foundations of instructional communication. In D. L. Fassett & J. T. Warren (Eds.), *Sage handbook of communication and instruction* (pp. 161–179). Los Angeles, CA: Sage.