

Affective Learning in General Education

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While working as a Fulbright Scholar at the City University of Hong Kong and as a consultant to the Hong Kong General Education Initiative during the 2008–2009 academic year, I made several presentations related to affective learning, a topic familiar to me because of my training as a psychologist (Gano-Phillips, 2009; Gano-Phillips & Friedman, 2009). This manuscript expands upon those presentations in the hope that faculty will become increasingly familiar with the purposes and value of affective learning in higher education. As used throughout this paper, affective learning refers to learning that relates to students' interests, attitudes, and motivations. It is my hope that this paper will demonstrate the utility of affective learning in course and program design and will stimulate the application by faculty members of affective learning principles in developing new General Education courses and programs.

The historical roots of affective learning can be traced back over 60 years. It was at the 1948 conference of the American Psychological Association that a call was made to develop educational taxonomies or classification schemes

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of the learning domains (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). These classification systems were intended to function as communication tools and standardized structures by which educators could better establish curricula and initiate research on learning (Menix, 1996). The first, and most influential, of these taxonomies covered the cognitive domain and was introduced in 1956. Over the intervening years, Bloom's Taxonomy for the Cognitive Domain (Bloom et al., 1956) has been the subject of much research. To this day, it continues to influence curricular development and assessment practices worldwide. Additional taxonomies were developed in the psychomotor and affective domains of learning in subsequent years, but their international acceptance and utilization have been more subdued. Comparatively few professors are aware of or focus upon the affective domain of learning, the affective learning taxonomy (Krathwohl, Bloom, & Masia, 1964), or how it can be used to guide curricular development.

Practically speaking, however, one need not look very far in the higher education arena before encountering conversations, course syllabi, or program goals and outcomes that have a decidedly affective tone to them. Faculty, for example, often speak of their desire for students to be more *open-minded*, to be *willing to collaborate* with one another on projects, to demonstrate an *appreciation for* a discipline or approach (e.g., the scientific method), or *to show a greater interest* in the coursework they are teaching. Likewise, program goals often reference affective dimensions of functioning when they include such statements as, students will *display a commitment* to ethical standards of practice, students *will show concern for* the welfare of others, or students will *value* life-long learning. Arguably, each of these statements contains some affective component. Miller (2005) noted that even

when they are not stated explicitly, affective learning outcomes are pervasive in education.

Defining Affective Learning

In its simplest form, affective learning characterizes the *emotional* area of learning reflected by the beliefs, values, interests, and behaviors of learners (Krathwohl et al., 1964; Smith & Ragan, 1999; Gronlund & Brookhart, 2009). Affective learning is concerned with how learners feel while they are learning, as well as with how learning experiences are internalized so they can guide the learner's attitudes, opinions, and behavior in the future (Miller, 2005).

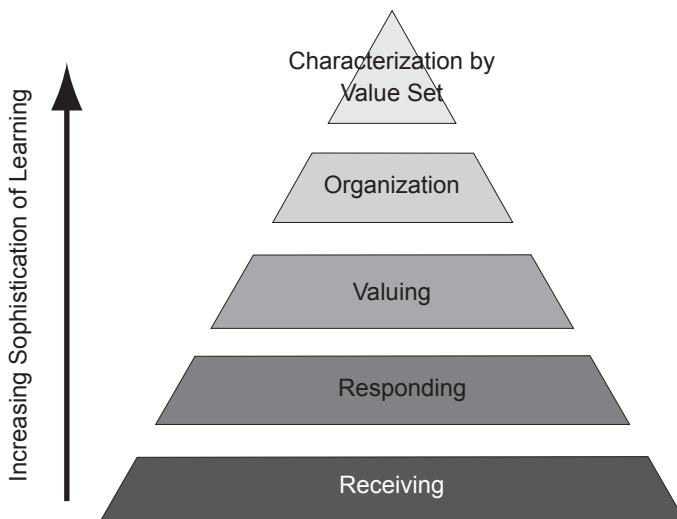


Figure 1. Affective Learning Taxonomy¹

¹ From "The basis for affective-domain classification," by D. R. Krathwohl, B. S. Bloom and B. B. Masia, 1964, *Taxonomy of educational objectives: The classification of educational goals. Handbook II: Affective domain*, pp. 36–38.

Krathwohl et al.'s taxonomy (1964) says that affective educational outcomes can be arranged in a hierarchy, according to complexity (see Figure 1). The hierarchy begins with an ability to listen to ideas. Next, is responding in interactions with others and demonstrating values or attitudes appropriate to a particular situation. The highest levels involve displaying a commitment to principled practice on a day-to-day basis, as well as a willingness to revise one's judgments and change one's behavior in light of new evidence (Shephard, 2008).

The first level of the affective taxonomy has been labeled "receiving" and refers to a learner's readiness to focus his or her attention on a particular issue. In order to advance in the taxonomy, a learner must be aware of or attend to something in the environment. A failure to receive information precludes the ability to move further up the affective hierarchy. Some examples that reflect this most basic level of affective learning include attending class and listening to lectures on various topics. When "receiving," learners are discovering new concepts from their environment and are showing a willingness to learn about them.

The second level, "responding," refers to showing a small commitment to an idea by reacting to or actively responding to the information that has been "received." Learning outcomes at this level may emphasize responses of acquiescence/compliance (reads assigned materials), willingness (engages in voluntary activities), or even satisfaction in responding (shows an "interest"). At this level of affective learning, students participate in learning experiences and selectively attend to course material, as compared to alternate ideas that might capture their attention or interest. Students demonstrate "responding" when they comply with the instructor's request to participate in class, when

they ask questions to the instructor, and when they complete assignments or homework.

At the third level, “valuing,” affective learning occurs when a learner shows definitive involvement in or a commitment to a particular object, phenomenon, or behavior. Valuing is based on the *internalization* of a set of specific values or attitudes, where clues to these values are expressed in the learner’s stable overt behavior. Students demonstrate “valuing” when they consistently prioritize time effectively to meet academic obligations and when they, for example, practice the safe handling of equipment and materials in a laboratory science course throughout a semester (Gronlund & Brookhart, 2009).

The fourth level of the taxonomy, “organization,” reflects the integration of a new value into one’s general set of values. Gronlund (1991) recognized the increasing complexity of this form of learning when he noted, “As affective outcomes move from simple to complex, they become increasingly internalized and integrated with other behaviors . . . to form complex value systems and behavior patterns” (p. 52). In “organizing” values, learners must resolve conflicts between various values and begin to rank various values according to their priorities. Examples of learning outcomes at the “organization” level include the acceptance of professional ethical standards and the formulation of a life plan that balances work and personal values.

The fifth and highest level in the affective taxonomy is referred to as “characterization by a value or value set” and occurs when a learner’s behavior is “pervasive, consistent, and predictable,” as if it has been adopted as a lifestyle (Gronlund, 1991, p. 34). One example of a learning outcome at this level would be a student who shows self-reliance when working

independently, regardless of the project or task assigned. The student has reached a consistent conclusion regarding his or her ability to independently solve problems. A second example that distinguishes the fourth and fifth levels of the taxonomy relates quite well to professional ethical standards. At the fourth level, learners accept professional standards while at the fifth level this acceptance leads the student to display a professional commitment to ethical practice on a day-to-day basis. A more complete description of the taxonomy as well as instructional examples can be found in Appendix I.

Critiques of the Affective Learning Construct

Given the existence of the affective learning taxonomy, one wonders why the affective domain has not been recognized or utilized to guide curriculum development to the same degree as the cognitive taxonomy. There are numerous factors that contribute to higher education's collective aversion to the affective domain (Pierre & Oughton, 2007). Some faculty have questioned the necessity of specifying affective learning outcomes altogether. They argue that affective learning is a by-product of cognitive learning and, therefore, affective learning outcomes do not need to be independently specified, taught, or assessed. On the surface, this assertion may seem reasonable, but much is gained when cognitive and affective domains are considered independently of one another. There are, in fact, close parallels between Bloom's taxonomy for the cognitive domain and Krathwohl's taxonomy for the affective domain (Smith & Ragan, 1999). It is, of course, possible that participation in the higher levels of Bloom's cognitive taxonomy (e.g., analysis, synthesis, evaluation) may imply a certain level of

affective involvement. However, in addition to cognitive goals, there may be good reason to consider affective learning in its own right. Consider, for a moment, the independent contributions of the domains of learning in the following example: delivering a motivational speech. It is the interaction of cognitive learning outcomes (e.g., knowledge of organizational strategies within a speech, application of strategies for persuading others), affective learning outcomes (valuing the activity and demonstrating its value through perseverance with the task of speech writing and delivery), and psychomotor learning outcomes (e.g., modulation of voice, use of nonverbal gestures) that determine the overall effectiveness of the speech. Failing to consider any one of the domains of learning would not allow a student to deliver the speech with the same effectiveness. Individuals may have the capacity for effective action (e.g., knowledge of how to give the speech) while lacking the motivation to act. Cognitive and affective learning, while complementary, are not completely overlapping domains, as cognitive outcomes focus upon what students learn while affective outcomes focus upon what students learn to value (Shephard, 2008).

Further challenges to working with affective learning arise from difficulties in precisely stating desired affective learning outcomes because they involve opinions, beliefs, and attitudes (Bloom et al., 1956; Smith & Ragan, 1999). The absence of clearly stated affective learning outcomes makes the assessment of those outcomes more challenging. Attitudes and values, as *internal states*, cannot be assessed in the same ways as physical/overt behaviors such as a person's skill at playing the piano or titrating chemicals, nor can they necessarily be assessed in the same ways as cognitive outcomes

(e.g., through examinations). Affective learning outcomes can, nevertheless, still be assessed in a variety of ways. In fact, social psychologists have worked to define and measure attitudes and values for well over 50 years (Miller, 2005).

Finally, and perhaps most pervasively, affective learning has suffered from benign neglect, wherein faculty have failed to identify and describe their legitimate aims for students' affective learning (Colby & Sullivan, 2009; Pierre & Oughton, 2007; Shephard, 2008). The affective domain is "messy and unpredictable" relative to the cognitively oriented classroom, leading to the avoidance of uncertainty. This failure to attend to affective learning outcomes may also result from fear associated with these learning outcomes. Shephard (2008), for example, argued that some individuals avoid specifying student affective learning outcomes because they are afraid of being accused of indoctrination or brainwashing. Regardless of the cause, affective learning has been ignored by large segments of the professoriate. The critical importance of affective learning in "whole-person development" can no longer be ignored in 21st century higher education.

Rather than abandoning affective learning outcomes in favor of strictly cognitive ones, we must recognize the interdependence of learning that is occurring and make efforts to assess each type of outcome. Current and future university students are expected not only to attain certain factual knowledge and problem-solving skills, but are increasingly expected by employers and by society more generally, to develop dispositions and personal characteristics that will help them succeed in our rapidly changing world. The challenge becomes not whether affective learning outcomes can

be specified independently of cognitive learning goals, but rather, under what circumstances might faculty and universities *want* to highlight affective learning outcomes and make an effort to specify intended affective learning outcomes, plan activities to support that learning, and explicitly assess affective learning (Gronlund & Brookhart, 2009).

The Current Context for Affective Learning in Hong Kong

As we turn our attention to the use of affective learning in higher education, it is important to consider the unique context of Hong Kong's higher education sector. There are two major educational reforms underway in Hong Kong that have a bearing on our consideration of affective learning. The first of these reforms relates to outcomes-based approaches (OBA) to teaching and learning, a phenomenon that has swept through higher education worldwide over the past several decades. This reform suggests the need to move from teacher-centric teaching practices to learner-centered practices that focus on explicitly stated and assessable goals for all students' learning. In an effort to provide leadership, in 2007 the University Grants Committee (an appointed committee of the HKSAR Government) established an Outcomes-Based Assessment Task Force (OBATF) to "render assistance to and encourage teaching staff to adopt outcome-based approaches" (University Grants Committees, 2008). Throughout the higher education sector in Hong Kong, outcomes-based approaches are in varying stages of implementation, with minor variations in terminology at each affiliated institution. At the core of the student-centered OBA, however, is a common philosophy that alignment

is necessary between intended student learning outcomes, teaching and learning methods, and assessment strategies, in order to promote achievement and demonstrable student learning (see Figure 2 below).

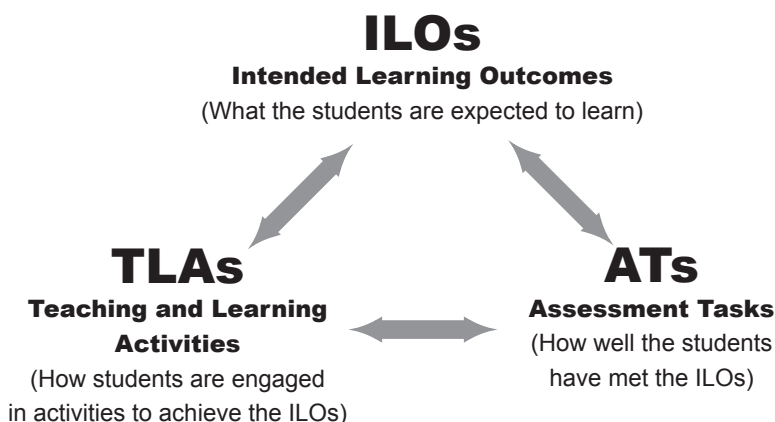


Figure 2. Key Relationships in Outcomes Based Approaches to Teaching and Learning

At the course level, intended learning outcomes (ILOs) must be clearly specified from students' perspectives and must be assessable. By stating what we expect students to know or be able to do upon completion of a course, we create an environment in which teaching and learning strategies can support students' achievement of those outcomes, and learning can be assessed in authentic ways (Friedman, 2009). Teaching and learning activities (TLAs) are simply activities that stimulate, encourage, or facilitate the learning of one or more of the ILOs. TLAs can include, but are not limited to, readings, lectures, role plays, internships, discussions, case studies, assignments or homework, field trips, service learning, or individual or group projects. ATs must relate directly to the stated ILOs to provide evidence that a particular

learning outcome has been achieved. ATs can be quite varied as well. They may include, but are not limited to, multiple choice examinations, essay examinations, journals, papers, assignments, participation, or even behavioral performances (e.g., giving a persuasive speech). The alignment of these three components of teaching and learning allow students to make the most of their university experiences and to demonstrate high achievement. Thus, it is in light of an OBA approach to teaching and learning that considerations of affective learning must be framed. We must consider what constitute appropriate affective intended learning outcomes, what teaching and learning methods allow students to achieve those affective ILOs, as well as how to assess students' achievement of affective learning outcomes.

The second major educational reform in Hong Kong that has implications for affective learning is the 3 + 3 + 4 reform. This far-reaching reform of the K-16 system is designed to offer opportunities to more students to pursue additional education and to better prepare students to work in our globally interconnected, knowledge-based economy. Practically speaking, this reform involves moving from a three-year baccalaureate degree following seven years of secondary education (3-4-3), to a four-year baccalaureate degree following six years of secondary education (3-3-4). The University Grants Committee has specified that, “[t]he four-year undergraduate programme should be coherent, and the additional year should not be a simple add-on to the current three-year undergraduate programme”(Legislative Council of Hong Kong, 2005). Thus, this reform calls for a complete overhaul of undergraduate education. With credits available through this additional year of university study, students will be exposed to “general education,” under the belief that a broad knowledge base will provide a foundation for life-long

learning. General education can be thought of as “that part of a curriculum that is shared by all students, provides broad exposure to multiple disciplines, and forms the basis for developing important intellectual and civic capabilities” (Association of American Colleges and Universities, 2009a).

The planning for this major change in the curriculum has been underway for years and is scheduled for full implementation at the university level in 2012–2013. General education, a key component of the forthcoming four-year university curriculum, is a new concept for many faculty in Hong Kong, who themselves experienced undergraduate education primarily in Hong Kong, China, or Great Britain, where there is no longstanding tradition of General Education Programs (GEPs). While some Hong Kong universities have had or currently have GEPs (e.g., the Chinese University of Hong Kong, Lingnan University), others have traditionally addressed the need of students for diverse learning experiences beyond their major programs of study in less extensive ways, such as with out-of-discipline course requirements, complementary studies, or college/school breadth requirements.

The irony that Hong Kong faculty have been mandated to add an “essential” component (General Education) to their curricula, a component that they themselves have often not experienced, is not lost. In fact, extensive efforts at faculty professional development at the institutional level as well as at the Hong Kong system level [Heads of University Committee (HUCOM) Symposia] have targeted this dearth of information and lack of experience surrounding GEPs in the run-up to the development or revision of each institution’s GEPs. Thus, it is in light of the major revision of the undergraduate curriculum and the development and shaping of new GEPs in Hong Kong that affective learning should be considered.

Historically, affective learning goals, when they have appeared at all in course syllabi or program goals, have often been aspirational in nature. However, the confluence of reforms in Hong Kong's higher education sector offers an opportunity to move affective learning from a position on the periphery of education, to a more prominent position, by making affective learning goals assessable from an OBA framework and within GEPs. This may very well be the time for affective learning to take its rightful place alongside cognitive learning in Hong Kong's higher education arena.

The Role of Affective Learning Outcomes within General Education Programs (GEPs)

GEPs often include affective learning goals. One way of thinking about GEPs and the courses that comprise them is that they are designed, at least in part, to help all students develop a favorable *attitude* toward learning in general. A quick perusal of the GEP goals that are emerging among institutions in Hong Kong reveals many affective learning statements relating to self-directed learning, life-long learning, judgment and ethical reasoning, and civic responsibilities. This is not surprising, in light of the way that affective learning goals have pervaded GEPs in other parts of the world.

In consultation with hundreds of U.S. higher education institutions, accreditation bodies, and employers, the Association of American Colleges and Universities (AAC&U) summarized four essential learning outcomes for 21st century education: knowledge of human cultures and the natural world, intellectual and practical skills, personal and social responsibility, and integrative learning (Association of American Colleges and Universities,

2005). The third of these essential learning outcomes, the development of personal and social responsibilities, is most directly related to affective learning outcomes. This outcome has been further described by AAC&U's Core Commitments initiative as having the following five dimensions:

- Striving for excellence: developing a strong work ethic and consciously doing one's very best in all aspects of college;
- Cultivating personal and academic integrity: recognizing and acting on a sense of honor, ranging from honesty in relationships to principled engagement with a formal academic honor code
- Contributing to a larger community: recognizing and acting on one's responsibility to the educational community and the wider society, locally, nationally, and globally
- Taking seriously the perspectives of others: recognizing and acting on the obligation to inform one's own judgment; engaging diverse and competing perspectives as a resource for learning, citizenship, and work
- Developing competence in ethical and moral reasoning and action: developing ethical and moral reasoning in ways that incorporate the other four responsibilities; using such reasoning in learning and in life (Association of American Colleges and Universities, n.d. (a)).

Thus, GEPs, both around the world and in Hong Kong, comprise an extremely important part of the curriculum in which affective learning outcomes may be found. In fact, GEPs may be the optimal area of the curriculum in which to house the majority of affective learning outcomes,

as GEPs are experienced by all students. As Hong Kong works to develop or revise GEPs, it is likely that affective learning outcomes will need to take their place alongside traditional cognitive learning outcomes, to best prepare students for the future.

Writing Affective Intended Learning Outcomes (ILOs)

As has been noted earlier, it is critically important to clearly state affective ILOs in order to allow for alignment of these outcomes with appropriate teaching and learning methods and assessment processes. Affective ILOs for individual courses or GEPs should be statements of what students are expected to be able to know, do, or value as a result of engaging in the learning process. Typically, it is best when ILOs are expressed from the students' perspective, in the form of action verbs leading to observable and assessable behavior, and directly related to criteria for assessing student performance. Ideally, all outcomes should be achievable and assessable. ILOs can be specified at every level of the affective taxonomy (see Table 1 for examples).

However, in the case of affective outcomes, there are several reasons why it may be particularly challenging to specify high-quality learning outcomes (Gronlund & Brookhart, 2009). First, the terminology used is often vague and little attention is given to defining what those outcomes are. Words like “appreciate,” “shows interest,” and “values” are fuzzy and often used in ILOs interchangeably when they may in fact have quite different technical meanings. This phenomenon is not unlike that in the cognitive domain, wherein vague statements like “understand” or “know” have come

to be replaced by much more specific statements like “describe,” “analyze,” or “apply,” once faculty learn about Bloom’s cognitive taxonomy and how the subtle differences in language are related to the teaching and learning methods and assessment of learning outcomes. Second, although some learning outcomes can be stated in terms of overt or observable behaviors (e.g., asks clarifying questions, volunteers participation), others refer only to *internal states* (e.g., is motivated to learn more, “appreciates” diversity or the arts), which must be inferred. An internal state is a broad category that stands for all of the attitudes, thinking processes, and motivations that individuals have, which are not directly observable, but which are recognized to exist within the minds of individuals. In cases where an affective learning goal is really an *internal state*, the affective learning outcome needs to be written as an *internal state*, with the recognition that the *internal state* itself is not observable or directly assessable, but with an acknowledgment that the assessments and their interpretations can be altered to examine the types of behaviors that provide the best evidence to support conclusions regarding the presence of that *internal state*.

It is the instructor’s clarity of purpose and instructional goals, relative to affective learning, which are the essential starting point for writing affective learning outcomes. The faculty member’s instructional intent should determine whether and how to state affective learning outcomes separate from cognitive or psychomotor ones. Fortunately, Krathwohl’s taxonomy provides guidance regarding the specification of affective ILOs. Time spent in clarifying the affective ILOs will make it much easier to specify both the teaching and learning methods and the assessments necessary to determine the achievement of those outcomes.

Table 1
Intended Student Learning Outcomes
Written at Each Level of the Affective Taxonomy

Receiving:	Student will be able to listen to different points of view on ethical issues in genetics and biotechnology
Responding:	Student will be able to assist teammates in solving problems in genetics and biotechnology
Valuing:	Student will be able to justify a position regarding the use of genetic experimentation from an ethical point of view
Organization:	Student will be able to adhere to ethical standards in discussing issues in genetics and biotechnology
Characterized by a value (or value set):	Student will be able to display commitment to using ethical standards when solving problems in genetics and biotechnology

(S. J. Friedman, personal communication, June 6, 2009)

Teaching and Learning Activities (TLAs) to Promote the Achievement of Affective Learning Outcomes

Once affective ILOs have been specified, faculty must turn their attention to designing TLAs to support students' achievement of those ILOs. There is growing awareness that traditional pedagogical methods involving faculty lecturing to large groups of students is not always the most effective strategy for the achievement of certain cognitive, and perhaps more important, affective outcomes (Harward, 2007; Kuh, Kinzie, Schuh, & Whitt, 2005). Instead, pedagogies that allow students to engage more actively in

the learning process, utilize psychomotor behaviors, or experience affective changes, are increasingly recognized as beneficial learning experiences (Association of American Colleges and Universities, 2007; National Survey of Student Engagement, 2007; Harward, 2007). This is not to say that lectures are ineffective at addressing various learning outcomes, but rather to explain that many additional teaching and learning methods can be utilized to achieve ILOs, sometimes with greater alignment between ILOs and TLAs than is possible with lectures alone. As a group, these activities are usually described as experiential or engaged learning, that is, learning that arises from direct experience. Experiential education, despite popular misconception, is not a new trend in higher education. John Dewey, perhaps the most famous proponent of experiential education, wrote about it in his seminal book, *Experience and Education*, back in 1938. What is new, however, and has sparked increased interest in experiential learning pedagogies, is the recognition that TLAs need to be more closely aligned with affective ILOs, to increase the chances of students being able to achieve those stated outcomes.

Experiential learning activities are extremely diverse and may involve participation in such activities as undergraduate research, community-based research, hands-on laboratory activities, simulations, internships/field work/practica, cooperative education (employment), service learning, study abroad programs, cross-cultural programs, civic engagement/public scholarship, or leadership training. Harward (2007) argued that service learning and community-based research are two exemplars of engaged pedagogies having “the greatest potential to transform attitudes, behaviors, and dispositions” (p. 10), precisely the types of outcomes that we have defined as falling within

the affective domain. Thus, depending upon the nature of the affective ILO, various experiential teaching and learning methods can be brought to bear on the situation.

For a number of reasons, experiential learning is particularly helpful in meeting more complex (higher levels in the taxonomy) affective learning outcomes, such as valuing, organization, and characterization by a value set (Association of American Colleges and Universities, 2005). First, it allows students to practice applying theory to practice (e.g., as social workers complete internships in community agencies, they practice enactment of their previously developed theories of social justice, thus demonstrating a characterization by a value set). Second, experiential learning helps students to develop desirable work skills such as the motivation to produce high-quality work or efforts to understand and appreciate alternative points of view. Third, these learning experiences can reinforce social and ethical values. Finally, experiential learning can be used across a broad spectrum of disciplines and in interdisciplinary contexts.

In examining one of these innovative experiential pedagogies in more detail, we can consider its usefulness in achieving affective learning outcomes in general education courses or programs. Service learning is a strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities (Campus Compact National Office, 2001). Service-learning typically engages students in a three-part process: classroom preparation through explanation and analysis of theories and ideas; service activity that emerges from and informs classroom context; and structured reflection tying

service experience back to specific learning goals (Jeavons, 1995). Service learning has been successfully applied across a wide variety of disciplines in the arts and sciences, as well as in professional education programs such as nursing, law, or pharmacy. There is an extensive literature on this teaching and learning method, as represented by several specialized publications and web resources (e.g., Michigan Journal of Community Service Learning, Campus Compact, National Service-Learning Clearinghouse).

Assessment Tasks (ATs) for Affective Learning Outcomes

When designing any AT, it is important to decide what performances represent evidence that a particular learning outcome has been achieved, as well as to ensure that there is an alignment between the ILO and the evidence collected and examined. An example from the psychomotor domain may help to clarify the importance of both defining evidence and aligning it with the ILO. Imagine that the psychomotor intended learning outcome for a nursing student is to “collect an uncontaminated blood sample.” The evidence that the ILO had been achieved is that the student could produce an uncontaminated vial of blood (as determined by clinical observation of the venipuncture technique focusing on the process utilized to collect the sample). Non-aligned evidence would include performance on a quiz testing knowledge of venipuncture procedures, or even production of the vial of blood without clinical observation (as it may have been collected by someone other than the student). The alignment between the ILO and the evidence collected is obvious in this example. Unfortunately, the identification of appropriate evidence and the alignment of that evidence with the ILO is not usually as clear-cut in the affective learning domain.

In fact, some of the largest challenges posed by affective learning relate to the assessment of affective ILOs. Even when ILOs have been clearly specified and any of a wide variety of aligned teaching and learning methods (TLAs) have been employed to promote the achievement of these outcomes, the assessment of affective learning outcomes requires creativity and, often, new learning on the part of faculty. This is because affective learning, unlike cognitive or psychomotor learning, cannot always be measured in direct ways. Instead, it may be instructive to think of the assessment of affective learning as occurring in two broad categories: direct assessments (similar to those for cognitive and psychomotor learning outcomes) and indirect assessments. Direct assessment involves examining samples of the direct work output of students, such as their performance in answering examination questions, in making a speech, or in mastering a clinical skill like venipuncture. Indirect assessment, on the other hand, refers to gathering information about student learning by looking at indicators of learning other than direct student work output. Indirect assessments are quite diverse and can include a wide variety of measures such as surveys, exit interviews, employer ratings, focus groups, or even reflective writing. Indirect assessments predominate in the affective learning domain. However, both direct and indirect assessments of affective learning outcomes are considered below.

Direct Assessment of Affective Learning Outcomes

The direct assessment of affective learning outcomes is most common at the lower levels in the affective learning taxonomy of Krathwohl et al. (1964). Some affective outcomes are written at a level where a direct assessment of behavior can provide evidence of the achievement of the affective ILOs. Instructors can, for example, take attendance to quantify the willingness of

students to receive information on a given subject. Likewise, instructors can record the number of questions raised by students in a recitation or discussion section of a course, or the number of completed homework assignments to quantify evidence at the “responding” level of the hierarchy. The majority of affective learning outcomes that faculty seem concerned with and find interesting, however, tend to occur at higher levels in the affective taxonomy. Thus, they are less amenable to direct assessment, as they reflect *internal states* such as attitudes, dispositions, or values. That is where a variety of indirect assessments become crucial for the assessment of affective ILOs.

Indirect Assessment of Affective Learning Outcomes

Some affective learning outcomes (e.g., attitudes, values) simply cannot be measured directly because they are *internal states* that exist only in the minds of individual students. These types of affective outcomes tend to be measured indirectly, as the expression of *internal states*, through the students’ thoughts and actions. The need to infer covert behaviors (e.g., feelings, attitudes, dispositions) from observed actions or to use completely indirect (non-observable) methods of assessment (e.g., self-report inventories) may be unfamiliar to many faculty. In fact, for some faculty, particularly those trained in the “hard sciences,” the concept of indirect measurement raises extreme skepticism and a tendency to discount the validity of affective learning altogether. Nevertheless, psychologists, sociologists, market researchers, and other social scientists have long established a tradition of measuring attitudes and dispositions, which must now be shared across all of academia.

The information gathered for conducting an indirect assessment of affective learning outcomes can come from a variety of sources, depending on the nature of the affective ILO. These sources include the self (e.g., an

outcome focused on an attitude), peers (e.g., an attitudinal outcome that affects group functioning/performance such as teamwork or the willingness to engage in collaborations), or even instructors, supervisors, or employers (e.g., an outcome focused on a broad concept like open-mindedness, valuing life-long learning or displaying a commitment to ethical behavior). Likewise, there are a variety of methods for indirectly assessing affective ILOs. Some of the most common assessments include self-reflective writing, self-report questionnaires, and surveys completed by others. Each is described briefly below.

Self-reflective writing (Journaling). Reflection refers to “the intentional consideration of an experience in light of particular learning objectives” (Hatcher & Bringle, 1997, p. 153). Many faculty who explicitly state affective ILOs use reflective journaling as a method of assessing their students’ achievement of those outcomes. When students reflect on their thoughts and feelings, they have a chance to share information about their *internal states* and attitudes. Students’ journals provide a window into their attitudes and beliefs. Faculty who require students to submit journals are not telling students what or how to feel, only that thinking and feeling are both important. Both reason and emotion are essential components of the reflective learning process (Felton, Gilchrist, & Darby, 2006). Effective reflection is characterized by a linking of experiential learning to course material. Further, the greatest likelihood of achieving the affective ILOs come from reflection that is guided by the instructor, occurs regularly over time rather than only once or twice, explicitly encourages the exploration of values, and permits feedback from the instructor (Felton et al., 2006).

Faculty can encourage students to integrate emotion and attitudes into their analytic reflections by providing prompts for journaling activities (see Campus Compact National Office, 2001, for guidance on structuring

reflections). For example, imagine a business communications course with an affective ILO that reads, “Students will be able to recognize and act on their professional responsibility to the local business community.” In this course, students engage in field work with local non-profit agencies to improve communications plans and marketing materials. Students may be prompted to answer such questions in their journals as, “How did this experience make you feel?” Subsequently, students may be asked to demonstrate a link between emotion and analysis by answering questions such as, “What are the implications of this experience and of your reaction to it, for how you will think, feel, and act in the future?” Through these activities, students can learn to analyze how emotion shapes their understanding of a social problem, as well as how the social problem shapes their emotions and future behavior (Felton et al., 2006). While journaling does not directly assess students’ attitudes or proclivity to become involved in pro bono business consultations in the future, the content of the journals can be seen as a behavioral proxy for the students’ attitudes about their professional responsibilities, which cannot be measured directly.

Self-Report Questionnaires. Another method of assessing affective ILOs involves asking students to report on their attitudes or values via a questionnaire. Such questionnaires are relatively easy to develop or adopt from other sources, and are often used in a pre-test, post-test design. In this manner, students’ attitudes can be assessed at the beginning of a course prior to certain TLAs, and again near the end of the course, to determine whether the learning activities led to any significant changes in attitudes. Often Likert scale responses are used (e.g., indicate your level of agreement or disagreement with each statement using the following five-point scale: 5 Strongly Agree — 4 Agree — 3 Undecided — 2 Disagree — 1 Strongly

Disagree) and data can be quickly and quantitatively summarized to examine possible attitudinal changes over time. Items on such questionnaires can ask for students' responses to specific and rather narrow attitudes or to broader statements of values. Additional resources for developing and implementing questionnaires are often available through assessment offices on campus, through websites that focus on affective learning outcomes (e.g., AAC&U's Core Commitments project; see Association of American Colleges and Universities, 2004), or through consultations with those responsible for OBA implementation.

To decrease the likelihood of students providing inaccurate reports of their attitudes due to expected social behaviors (i.e., answering in ways the faculty member has indicated is more desirable), these types of questionnaires should not be graded and should, ideally, be anonymous. With sophisticated software available in many online course platforms like Blackboard or WebCT, students can be given "credit" for completing a survey questionnaire while having their responses remain anonymous. The anonymous feedback is still sufficient for faculty to evaluate whether the instruction is changing attitudes of the class in a desired direction, although individual assessment of students' changes in attitudes are not identifiable.

Surveys of peers, instructors, supervisors, and employers. A final major method of assessing affective ILOs uses data from sources other than the individual students themselves. Faculty can, and regularly do, rate students' behaviors, but peers, internship supervisors, co-op employers, and even post-graduation employers are alternative sources of behavior ratings that may tell instructors about students' affective learning. The nature of the instruments completed by others range from checklists (presence/absence of a performance), to rating scales (levels of performance), to the use of holistic scoring rubrics

(impression of overall performance), depending upon the type of information being sought through the assessment (Gronlund & Brookhart, 2009).

The highest validity for such instruments occurs when peers, supervisors, or employers are asked to rate students' overt, observable behaviors rather than the students' attitudes or motivations (Gronlund & Brookhart, 2009). For example, it would be better to include items on a checklist or rating scale such as "Student maintains consistent work hours" and "Student completes assigned tasks within specified time limits" rather than asking others to rate students' attitudes using items such as, "Student shows professionalism" or "Student values a strong work ethic." It is likely that assessment devices already exist for many courses involving peer group projects, internships, or co-op employment. With careful attention to the affective ILOs, slight modifications of those assessment devices could yield useful data to evaluate the achievement of affective learning outcomes from informants other than the students themselves.

Program-level Assessment of Affective Learning Outcomes

Institutions must carefully consider the process and timing of measuring affective learning outcomes. Some outcomes are expected to occur gradually over time, as the result of the cumulative experiences of students over multiple classes, rather than being mastered within the context of a single, semester-long course (e.g., "Students will value life-long learning" or "Students will develop sensitivity to the common concerns of human existence"). Particularly in the case of attitudinal change, where change is often subtle, it may be important to consider program-level assessment of affective learning outcomes rather than focusing exclusively on course-level assessment of those learning outcomes.

Program-level assessment of learning outcomes presents its own unique set of challenges, particularly in GE programs. This is because such programs are typically comprised of a large array of courses from which students make selections from various categories. Thus, responsibility for the achievement of specific program outcomes is diffused, posing a problem for the assessment of the GE program. After all, GE courses are typically staffed by a loose collection of faculty culled together from across the university and among the various schools or colleges. More specifically, if no single course instructor feels “responsible” for the achievement of a specific affective learning outcome within the course that they teach, then no course instructor worries too much about the TLAs or assessment of that affective learning outcome, assuming other faculty will address the affective outcome in their courses. In the end, no one addresses the affective learning outcome in their course and the achievement of the outcome is left to chance. This is perhaps what has happened with most affective learning outcomes in higher education over the past several decades.

Therefore, it is incumbent upon institutions to carefully map which GE program outcomes are associated with which courses within the GE program, so that they can be reasonably assured that all students completing the general education program requirements (using various combinations of courses) have met the program outcomes. While an extensive discussion of the curricular mapping of GE programs is beyond the scope of this paper, resources are available to assist universities as they embark on this challenging task. Many institutions, for example, have recently seen virtue in the methodology of developing student portfolios as a way of capturing evidence that GE program learning outcomes are being achieved from the broad array of courses making up the students’ learning experiences. Many

questions remain concerning the type of evidence to be collected in the portfolio and the methods of evaluating that evidence, but the VALUE Project (Valid Assessment of Learning in Undergraduate Education) is leading the way in examining these questions (see Association of American Colleges and Universities, n.d. (b) and Association of American Colleges and Universities, 2009b). Using electronic portfolios (e-portfolios) that can be organized and presented in ways appropriate for different audiences, the VALUE Project seeks to document the quality of student learning by developing ways for students and institutions to collect convincing evidence of student learning. Affective learning outcomes, like cognitive and psychomotor ones, must be considered in this program-level assessment process.

Examples of Affective Learning Outcomes in GE Courses

In the remainder of this paper I provide two examples of affective learning outcomes in general education courses from my own experiences with teaching at the University of Michigan – Flint. In each case, I describe the process of defining the affective ILOs, the teaching and learning strategies employed and, ultimately, the assessments utilized with the affective ILOs. The first case involves the revision of an existing course to include a new affective learning outcome, while the second case represents the involvement of a team of faculty in developing a new course. Each example describes different teaching and learning methods, as well as assessment strategies for affective learning outcomes.

Example 1 – Child Psychopathology

I decided to completely redesign this course to better achieve my goals.

The course is a popular elective in the Psychology degree program and is also open to non-major students. One new goal that I had was to have students “care” about mental health issues in children, to possibly become advocates for children, who would otherwise remain faceless and voiceless as decisions are made about services and funding for their mental health needs in the United States. I wanted students take more than an academic and cold cognitive look at childhood mental health problems by recognizing a need and wanting to take action.

Intended Learning Outcomes (ILOs)

Examining the taxonomy of Krathwohl et al. (1964) in light of my goal of “caring,” I quickly realized that the outcome I desired was something beyond the range of receiving, but perhaps not as complex as organization or characterization by a value set. Ultimately, I specified an intended student learning outcome at the valuing level, which read, “Students will be able to share thoughts and feelings about an important social issue, specifically, the care and treatment of abused and neglected children.”

Teaching and Learning Activities (TLAs)

To give students experiences that would allow them to “care,” I envisioned a service learning project in our local community where students would have a chance to become familiar with a residential treatment facility for abused and neglected children and the children who lived there. Arrangements were made for all necessary logistics (e.g., criminal background checks and tuberculosis screenings) to allow students to visit the residential treatment facility on at least three occasions during the semester. The first visit was a class orientation, where all of the students toured the facility, met some of

the staff and children, and scheduled their subsequent visits. During their two subsequent individual visits, the students spent several hours at the on-site school and in the residences where the children lived. They had the chance to observe, interact with, and assist the resident children with their school work, recreational activities, and general socialization skills. Throughout the time when these visits were occurring, the students kept a journal of their experiences, and had ongoing opportunities in the university classroom to share these experiences with one another and to discuss their questions or concerns. Thus, the TLAs designed to align with the intended affective learning outcome included lectures, classroom discussions, visits to the treatment facility, and writing activities.

Assessment of Affective Learning

I decided to assess the affective ILO using reflective journal writing. I believed that keeping a journal and the reflection that accompanies the process would be an effective method of teaching and learning aligned to the achievement of my ILO. Further, the outcome of this same activity, the submitted journal, could serve as a method for assessing the achievement of the affective ILO. That is, the process of writing the journals would assist my students in deepening their understanding and feelings about this topic, and the journals themselves could be used as evidence of the development of that concern. The students were guided with weekly prompts, beginning with requests to explore their expectations prior to their first visit to the residential treatment facility, and culminating with a final prompt in which they were asked to describe their “personal reactions to learning more about the plight of children suffering from significant abuse or neglect.” Student journals

were reviewed weekly, with feedback given to improve the quality of the reflective writing. The journals were also graded, primarily with respect to the students' ability to link experiences while at the treatment facility to their course work and to the weekly prompts for writing. Thus, there were no "correct" answers in journaling. Rather, the quality of the process of fulfilling the journaling requirement was assessed (students were assessed for their ability to articulate and share the thoughts and feelings they had experienced as a result of the service learning). The journals accounted for 18% of the final course grade. Statements within the students' journals provided evidence that the affective intended learning outcome was, in fact, being achieved. For example, one student wrote, "my personal reaction to learning more about the plight of children suffering from significant abuse and neglect was strong. I could be accused of having put on blinders to protect myself from these realities in the past, but not anymore."

An additional source of information about the impact of the service learning project and the achievement of the affective ILO came from an informal survey I administered at the end of the course. Eighty-eight percent of the class felt that the service learning project should be continued in future semesters, and an equal proportion said that the project should include journal writing assignments. In response to an open-ended question about the most important lesson learned from the project, one student noted, "The journal entries helped me to reinforce and revisit what I saw, what I learned, and how I felt. It encouraged me to see other possible uses for a degree with psychology." Not only had this student shared thoughts and feelings about abused and neglected children, but she was considering seeking future employment to work with this population.

Example 2 – Ethics in Public Life

This example highlights the challenge of developing and delivering an interdisciplinary general education course with multiple instructors. Faculty from seven academic disciplines across colleges/schools collaborated to develop this new course, entitled “Ethics in Public Life.” This course was a pilot “capstone” general education course, designed to encourage the integration of disciplinary-specific knowledge and skills with general education learning. The affective learning outcomes related to students’ development of an interest in, and a heightened awareness of, the ethical dilemmas that they face in everyday life.

Intended Learning Outcomes (ILOs)

As we began meeting to plan the course, we quickly learned that reaching a consensus on course goals and intended student learning outcomes was going to be time-consuming. The discussion amongst my colleagues while planning the ethics course was instructive as to why affective learning outcomes are often avoided. Specifically, there was a deep misunderstanding and divide between faculty who advocated for and against our stating explicit affective student learning outcomes. Those who opposed the use of affective learning outcomes did so because they initially thought that we were trying to teach specific affective or moral truths (a specific way to think, or a “correct” response to an ethical dilemma). They argued against efforts to get students to conform, because they felt that the students would simply learn what they were “supposed” to say and would say it, regardless of their true beliefs or attitudes. Over time, those who advocated for the inclusion of affective learning outcomes within the course were able to convince the other faculty

that the goal was not to teach “what” to think about ethical issues, but rather “how” to approach the process of thinking about ethical issues and, most importantly, “that” it is a worthwhile endeavor to think deeply about the ethical issues that we routinely confront. The student affective learning outcome that we agreed upon after much debate and discussion was that the “Students will be able to examine relationships between codes of ethics and individual ethical behavior,” and was written at the second level, “Responding,” in the taxonomy of Krathwohl et al. (1964).

Teaching and Learning Activities (TLAs)

We agreed upon a theory of ethical development (Rest, Bebeau, & Volker’s four-stage model, 1986) as the organizing framework for the course. To give the students opportunities to consider individual ethical behavior in light of the theory, we decided to host a series of public symposia (for faculty, students, staff, and our local community) on the topic of ethics in everyday life (supported by a small grant). Each symposium featured a keynote speaker as well as panelists who spoke on the following subjects: the Ethical Food Movement, Ethical Dilemmas in Business Practice, Poverty and the Ethics of Social Service Delivery, and Ethical Challenges of 21st Century Healthcare. Each symposium was preceded by a luncheon to encourage discussion among the diverse participants.

The students were expected to consider and apply a particular stage of the ethical development theory to their analyses of the symposia events. Further, they were asked to take increasingly active roles at each symposium across the semester. By the final symposium, during the luncheon that preceded the symposium the students were facilitating small group discussions on

ethics. The students had systematically moved from a role of “receiving” information (level 1 in the Krathwohl et al. taxonomy), to “responding” or even “valuing” (levels 2 and 3) through the design of the course activities. Weekly classroom discussions, written reactions to symposium speakers, and occasional lectures supplemented the public symposia as TLAs designed to align with the intended affective learning outcome.

Assessment of Affective Learning

We decided to use three distinctly different mechanisms to assess the students’ achievement of the affective ILO, “to examine relationships between codes of ethics and individual ethical behavior.” First, the students practiced examining relationships between codes of ethics and individual ethical behavior through Blackboard discussion board assignments following each of the four symposia. Classroom discussions that were held following the submission of these online assignments provided the students with feedback about their analyses and alternative points of view. Second, the students’ ability to achieve the affective ILO was assessed through an oral, group format final examination. This examination involved teams of six students being presented with a novel case study in which they were asked to analyze and discuss complex ethical issues from the multiplicity of perspectives that they had been exposed to throughout the semester. We developed a scoring rubric for this activity, which included faculty ratings of each student on their “ability to negotiate roles among one another and make consensus judgments as a group,” as well as their “knowledge of course material, specifically the four components of ethical behavior development” and their “ability to apply the theory to the individuals within the case study.” In sum, the faculty ratings

allowed us to consider how well students had achieved the affective ILO.

The final mechanism for assessing the affective ILO came from an Integrative Reflective paper assignment entitled, “What I have learned about ethics in public life.” Through this paper, the students’ comments demonstrated the value that they placed on being able to examine the relationship between codes of ethics and individual ethical behavior. One student commented, “Personally, the symposia gave me the chance to look at the world with a more critical eye. I now see that ethics isn’t a class or a random scenario, but something that is a part of you; like character.” While these statements are qualitative and anecdotal, and on their own would not provide sufficient evidence of the achievement of the affective ILO, they certainly supplemented the other assessments and attested to the fact that the students valued the development of their ethical decision-making skills.

Conclusions — On the Opportunity and Challenges of Affective Learning

Affective learning outcomes are essential components of a 21st century university education, as exemplified in statements of graduate outcomes, various accreditation standards, and employer surveys internationally. Though less familiar to most faculty than cognitive learning outcomes, affective learning outcomes are no less salient or critical to student success in the ever-changing, multicultural, global, information-laden society in which we live. In fact, some argue that affective learning outcomes are more important for the success of graduates and the success of society than are many of the specific cognitive outcomes emphasized in current programs.

With globalization putting distinctly different cultures in close contact, rapid economic expansion leading to rapid career displacement, and the growth of higher education leading to more diverse student populations inhabiting our campuses, affective learning outcomes are increasingly indispensable outcomes of a university education.

The time for affective learning outcomes to play a more extensive role in higher education is now. Spurred by efforts to make valid assessments of student learning (OBA) and new general education initiatives, Hong Kong's higher education institutions are poised to bring affective learning to the forefront of their pedagogy. The process of harnessing the power of affective learning begins with clearly specifying intended affective learning outcomes, proceeds through the development of effective and engaging teaching and learning methods designed to promote such learning, and concludes with sophisticated and valid assessments of the level of achievement of those desired learning outcomes. Within the realm of GEPs, affective learning must be considered at both the course and program levels. Individual faculty must be willing to struggle with the complexities, uncertainties, and new learning necessary to implement affective learning in their general education courses, and their efforts must be coordinated centrally through GE program curriculum mapping to connect course-level affective outcomes to broader and more ambitious program-level outcomes.

As universities step up to the challenge of defining, facilitating, and assessing essential general education learning outcomes, including those elusive affective learning outcomes, we will have to model the life-long learning skills we so frequently say we want to see in our students. If we are to achieve the promise that OBA and GE have to offer, faculty will have to adapt and learn new methods and strategies for TLAs, as well as for the assessment

of affective learning outcomes. The only question now is whether faculty will choose to step up to the challenge of life-long learning and educate ourselves, alongside our students, or whether we will choose to profess something that we, ourselves, are sometimes unwilling to do.

* * * * *

Appendix I. Krathwohl, Bloom, and Masia's Taxonomy of the Affective Domain (1964)²

Level and Definition	Illustrative Verb
<p>Receiving refers to the student's willingness to attend to particular phenomena of stimuli (classroom activities, textbook, music, etc.). Learning outcomes in this area range from the simple awareness that a thing exists to selective attention on the part of the learner. Receiving represents the lowest level of learning outcomes in the affective domain.</p>	<p>asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits erect, replies, uses</p>
<p>Responding refers to active participation on the part of the student. At this level he or she not only attends to a particular phenomenon but also reacts to it in some way. Learning outcomes in this area may emphasize acquiescence in responding (reads assigned material), willingness to respond (voluntarily reads beyond assignment), or satisfaction in responding (reads for pleasure or enjoyment). The higher levels of this category include those instructional objectives that are commonly classified under "interest"; that is, those that stress the seeking out and enjoyment of particular activities.</p>	<p>answers, assists, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes</p>

2 Downloaded from http://assessment.uconn.edu/docs/LearningTaxonomy_Affective.pdf.

Appendix I. Krathwohl, Bloom, and Masia's Taxonomy of the Affective Domain (1964) (Cont'd)

Level and Definition	Illustrative Verb
<p>Valuing is concerned with the worth or value a student attaches to a particular object, phenomenon, or behavior. This ranges in degree from the simpler acceptance of a value (desires to improve group skills) to the more complex level of commitment (assumes responsibility for the effective functioning of the group). Valuing is based on the internalization of a set of specified values, but clues to these values are expressed in the student's overt behavior. Learning outcomes in this area are concerned with behavior that is consistent and stable enough to make the value clearly identifiable. Instructional objectives that are commonly classified under "attitudes" and "appreciation" would fall into this category.</p>	<p>completes, describes, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works</p>
<p>Organization is concerned with bringing together different values, resolving conflicts between them, and beginning the building of an internally consistent value system. Thus, the emphasis is on comparing, relating, and synthesizing values. Learning outcomes may be concerned with the conceptualization of a value (recognizes the responsibility of each individual for improving human relations) or with the organization of a value system (develops a vocational plan that satisfies his or her need for both economic security and social service). Instructional objectives relating to the development of a philosophy of life would fall into this category.</p>	<p>adheres, alters, arranges, combines, compares, completes, defends, explains, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes</p>

Appendix I. Krathwohl, Bloom, and Masia's Taxonomy of the Affective Domain (1964) (Cont'd)

Level and Definition	Illustrative Verb
<p>Characterization by a value or value set. The individual has a value system that has controlled his or her behavior for a sufficiently long time for him or her to develop a characteristic "life-style." Thus the behavior is pervasive, consistent, and predictable. Learning outcomes at this level cover a broad range of activities, but the major emphasis is on the fact that the behavior is typical or characteristic of the student. Instructional objectives that are concerned with the student's general patterns of adjustment (personal, social, emotional) would be appropriate here</p>	<p>acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, uses, verifies</p>

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