Section 9.4
Measuring Professional Orientation: Values and Attitudes

identification with and respect for the accounting profession. Values are "the important and stable ideas, beliefs, and assumptions that affect our behaviors" (Fuhrmann and Grasha, p. 22). Criteria for determining an individual's value commitments include:

- Choosing the targeted value freely from among examined alternatives
- Affirming the value publicly
- Acting consistently and repeatedly in accordance with the value (adapted from Raths and others, 1966; Fuhrmann and Grasha, 1983)

Evidence of values and attitudes can be obtained by observing students' and graduates' voluntary behavior (choosing and acting) and by self-reports of preferences, agreement, and behavior (choosing, affirming, and acting). This discussion presents:

- A brief introduction to measurement of values and attitudes
- Suggestions for measurement of four aspects of professional orientation drawn from the AECC's *Objectives*, using the framework of choosing, affirming, and acting consistently

9.4.1 Measurement Strategies for Values and Attitudes

Many strategies for measuring values and attitudes are familiar to faculty. Examples include:

- Observer judgments of actions in simulations, internships, or other performance situations
- Content analysis of focus group discussions
- Participation rates in activities related to targeted values and attitudes
- Students' ratings of agreement with statements of values and attitude
- Students' self-reports of relevant behavior

As in measurement of knowledge and skills, the measurement of values and attitudes depends on clear statement of objectives. Procedures for developing interrater reliability, described in Section 9.3, should be applied when using observer judgments, rating scales, and focus groups to assess professional attitudes and values. Participation rates can be obtained through various unobtrusive measurement strategies such as head-counts or sign-in logs at department-sponsored programs. Ratings of agreement with value statements require statements that are written to minimize the influence of social desirability. Students' self-reported behavior can provide relatively reliable data although validation of all instruments is always advisable.

Pitfalls in Assessment of Values and Attitudes: In general, it is better to base judgments of values and attitudes on what people do rather than on what they say, since individuals can understand and affirm a value without acting upon it. Thus individuals may recognize an ethical situation, analyze the situation using valid ethical frameworks, and identify the morally correct response, yet lack the moral will to act on their analysis by refraining from unethical conduct (such as plagiarism or cheating) (Rest, 1986; Cony and Nelson, 1989). Similarly, students may describe themselves as open to diversity (affirming), yet fail to notice that they avoid working in group situations with peers from ethnic or racial groups other than their own (choosing, acting).

The challenge, then, in measuring values and attitudes is to *identify the kinds of behavior most likely to reflect the existence of the desired value or attitude*. Because it is not always possible to measure behavior, self-report instruments must frequently be used. When using self-report data, multiple measures can be used to strengthen conclusions. Validating self-report instruments using criterion measures also strengthens the basis for drawing conclusions based on their results.

9.4.2 Measuring Values and Attitudes in the Accounting Curriculum

In the *Objectives*, the AECC identifies three central outcomes related to professional orientation:

- Lifelong learning (p. 6)
- Professional integrity: ethics and judgment (pp. 2–3)
- Personal capacities and attitudes (p. 8)

The *Objectives* also suggests an underlying capacity that integrates knowledge, skills, and values:

- Learning to learn

This section suggests measurement strategies for each of these four outcome categories, using the framework of choosing, affirming, and acting consistently as it applies to accounting situations.

9.4.2.1 Lifelong Learning: As defined by the AECC, an attitude of lifelong learning is essential for learning to learn. This attitude, as described in the *Objectives*, has two major components:

- Valuing continual improvement of self and profession
- Welcoming, "even thriving on, uncertainty and unstructured situations" (p. 6)

Continual improvement of self and profession: Students who value continual self-improvement can be expected to *choose* activities that support personal and professional growth, to *publicly affirm* the importance of such activities and their intention to engage in them in the future, and to demonstrate a consistent pattern of *acting* on their intentions over an extended period of time. Phrased as a specific program objective, this value might be stated as follows:

> *The student actively seeks out and affirms the value of opportunities for continual learning, self-improvement, and improvement of the profession*.

Indicators that students value continual improvement might include:

- Participation in faculty research or membership in student chapters of professional organizations (choosing, acting)
- Self-reported plans to remain professionally active after graduation (affirming)
- Agreement with statements in support of lifelong learning (affirming)

The Locus of Learning Motivation Scale, reproduced in Appendix 8, is a self-report measure of commitment to lifelong values (Nelson, 1992).

Table 9.7 illustrates a measurement plan for the goal of continual improvement of self and profession. Note that not all students are expected to participate in all activities, but that some participation by all (or some designated percentage of) students may be a realistic *program* goal.

Welcoming uncertainty and unstructured situations: Section 9.3 describes methods for measuring the *skills* required to make decisions in unstructured situations, for example, critical thinking, problem solving, and teamwork. The AECC *Objectives* emphasizes that students must also develop an *attitude* of accepting and thriving on the challenges of unstructured situations. A relevant objective would be:

> *The student actively seeks out and affirms the value of opportunities to solve unstructured problems and to work in unstructured situations*.

Applying the criteria for assessment of values, the student who welcomes uncertainty and unstructured situations might be expected to:

- Demonstrate a preference for instructional methods that involve unstructured situations, for example, the case method, simulations, and collaborative learning.
- Go beyond assignments to consider implications (choosing, affirming)
- Consistently seek out opportunities to work in complex, unstructured situations, for example,

choose an internship in a start-up company (choosing, acting)

Available instruments: Several existing instruments assess attitudes and values relevant to students' receptiveness to uncertainty and unstructured situations.

Learning Styles: The preference for unstructured situations is related to several widely-used models of students' approach to learning. For example, the Myers-Briggs Type Indicator (MBTI) includes a scale, the Sensing/Intuiting dimension, that could be used to assess students' preference for structured or unstructured situations (choosing, affirming). Students who score high on the Sensing mode tend to prefer concrete detail and well-structured, practical learning involving the use of direct application of rules and procedures, while students who score high on the Intuitive mode are more likely to be comfortable with ambiguity, abstractions, hypothetical situations, and less-structured learning situations. Accounting majors generally prefer the Sensing mode (Geary and Rooney, 1993, see also Schroeder, 1993).

Intellectual development: The model of intellectual development developed by William Perry, Jr., characterizes students along dimensions of structure, uncertainty, and reliance on authority. An instrument with direct application to the classroom is the Educational Environment Preferences scale (LEP), which assesses student's preferences for structured or unstructured learning situations, based on Perry's model (Moore, 1987).

Dispositions toward Critical Thinking: The Critical Thinking Dispositions Inventory (CCTDI) assesses students' tendency to endorse values related to learning in unstructured situations, for example open-mindedness, inquisitiveness, systematic and analytical thinking, truth-seeking (attention to evidence), and the need to make judgments in the face of uncertainty (Facione, Sanchez, Facione, and Gainen, forthcoming).

9.4.2.2. Professional Integrity: A second key dimension of professional orientation is professional integrity. Central to professional integrity is the ethical dimension, which includes three characteristics identified by the AECC: understanding of the ethics of the profession, the ability to make value-based judgments, and a disposition "to address issues with...concern for the public interest" (*Objectives*, pp. 2–3).

Technical knowledge of the ethics of the profession can be assessed by examination, but professional integrity requires the disposition to *apply* ethical principles in specific, real-world situations. As noted in Section 9.4.3, ethical reasoning is often assessed using the Defining Issues Test (Rest, 1990); this instrument may also provide insight regarding the values chosen by students and graduates, since it requires them to rank-order values.

Cases and dilemmas that involve an ethical dimension offer opportunities to observe and judge students' commitment to the ethics of the profession. Students' responses can be rated for recognition of the ethical dimension of the case, appropriate application of ethical principles of the profession, and the value orientation reflected in their decisions.

A simplified rating scale is suggested by research on the impact of integrating ethics into the accounting curriculum (Hiltebeitel and Jones, 1991). In this research, students read brief dilemmas related to personal and professional issues arising in the workplace, then rank the importance of six criteria that could be used to resolve the dilemma. The criteria are:

a. My personal integrity
b. Keeping my job
c. The respect of my peers
d. Legal responsibility
e. Professional responsibility
f. Getting promoted

Options b, c, and f are considered to reflect lower-level moral stages than items a, d, and e (based on Kohlberg's theory of moral development, 1976). This method adapts the strategy on which the Defining Issues Test is based (discussed in Section 9.4) to the professional context with emphasis on accounting situations. Although these criteria are quite general, they were sufficient to

discriminate between treatment and control groups in the experiment. The criteria can be modified or extended to include other aspects of professional ethics, for example concern for the public interest.

As noted earlier, however, such measures are at best proxies for actual behavior, and results may not be consistent with students' actions. An experiment in an auditing course demonstrates how this discrepancy can be used for both instruction and assessment. The researchers returned examinations with false grades, some 10 points over, some 10 points under, and some with no change. Nearly all students in the group which had points deducted reported an error, but no students in the other two groups reported errors. The researchers note that reporting the results of this experiment to the class increased motivation to discuss issues of integrity in auditing and management (Dirsmith and Ketz, 1987).

In addition to the ethical dimension of professional integrity, the *Objectives* suggest that graduates "should be prepared to address issues with integrity objectivity and competence." As with other aspects of professional orientation, these attitudes can be assessed using ratings by peers and faculty, judgments of internship supervisors and employers, and in some cases, attitude scales.

Students' attitudes toward objectivity can be measured using the CCTDI (Truth-seeking and Open-mindedness Scales), mentioned above; this instrument also measures attitudes toward several important dimensions of professional competence, notably, analytical and systematic thinking and the willingness to suspend judgment (Maturity subscale) (Facione and others, forthcoming).

9.4.2.3. Personal Capacities and Attitudes: In addition to its special emphasis on lifelong learning, the AECC *Objectives* identifies the following important "personal capacities and attitudes":

- Creative thinking
- Integrity
- Energy
- Motivation
- Persistence
- Empathy
- Leadership
- Sensitivity to social responsibilities (pp. 6 and 8)

These capacities are difficult to judge, but can be inferred from the extent and quality of, students' participation in the academic program and related educational experiences. Again, faculty, peer, and supervisor ratings can be compiled to obtain a profile of students and graduates on these dimensions. An example is the assessment of students' *sensitivity to social responsibility*. An objectives based on this outcome might be stated as follows:

> *Students will exhibit social responsibility in professionally relevant contexts*.

Performance criteria could include voluntary involvement in professionally related community service activity, voluntary expression of socially responsible attitudes in class discussions, and inclusiveness and sensitivity in teamwork situations. Indicators such as self-reports and observational data can provide information relevant to this objective as to others.

Professional orientation should also include a positive attitude toward the accounting profession. A widely-used, validated measure of attitudes toward the profession is the Accounting Attitude Scale (AAS; Nelson, 1992; see Appendix 9). A variation of the AAS yielded substantial changes in agreement ratings on several items after a new curriculum was implemented at Arizona State University For example, at the end of the first year of the new program, students showed higher levels of disagreement with the statement, "Accountants are number-crunchers" who "seldom work with people" (McKenzie, 1993). Attitude change of this nature may help to recruit a more diverse population of students to the profession, and may serve as an indicator of students' motivation to persist in the profession.