Characteristics of Effective Teaching in Higher Education:
Between Definitional Despair and Certainty

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Conflicting claims about the definition of teaching effectiveness in higher education abound. While some argue that the characteristics of effective teaching are well known and supported by a large body of research, others argue that teaching cannot be readily defined, and attempts to do so are doomed. The author reviews the ways in which the topic of college teaching effectiveness has been explored, detailing findings and discussing ways in which this literature can inform decision making in higher education.

Uncertainty over how to define teaching effectiveness is at the heart of many difficulties entailed in developing or administering approaches to teaching evaluation or faculty development activities. This uncertainty often is expressed in the form of several frequently heard statements:

We know what constitutes effectiveness in research, but there are no standards for judging teaching.

Teaching is situation-specific. There is no one definition of it.

Teaching is an art, not a science.

Educational research reports contradictory findings about teaching effectiveness.

These observations often lead to a throwing up of hands, to an abandonment of the search for a clearly articulated rationale behind efforts to help others develop their teaching or make sound judgments about teach-
ing effectiveness. Yet recruiting new teaching faculty, orienting and mentoring them into the profession, assigning teaching responsibilities, and evaluating teaching all take place routinely—often on the basis of unarticulated, and hence unexamined, definitions of teaching effectiveness. Academic life goes on despite definitional despair.

Over the years, in response to this despair, several scholars have attacked the belief that there is not or can never be any valid knowledge about what constitutes excellence in teaching. Several lay this definitional despair at the door of prevailing attitudes and values.

In his classic review of "The Mythology of Teaching," Kenneth Eble (1988) enumerated 12 faulty assumptions that get in the way of developing what he called "the craft" of teaching, one of which is the assumption that good and bad teaching cannot be identified. At about the same time, sociologist Hans Mauksch identified "a number of myths and stereotypes that mitigate against accepting teaching as a professional skill and knowledge-based activity," (1987, p. 14). Several of these myths—that teaching expertise is no more than subject matter expertise, that teaching talent is innate rather than developed, and that teaching is eminently idiosyncratic—parallel those in Eble's work and lead to the same conclusion, disputed by both authors: Teaching cannot be evaluated because effective teaching cannot be defined.

A similar list of popular claims about teaching expertise has been examined more recently by Svinicki (1995), who argues that such claims devalue teaching. She vigorously refutes the contention that teaching effectiveness cannot be defined. In a later article, Svinicki and coauthor Robert Menges (1996) cite the dangers of claiming that teaching effectiveness cannot be assessed:

Because teaching is difficult to study, some have argued that it cannot be studied. Critics who refuse to study it feel free to fall back on hearsay, personal anecdotes, and questionable survey research.
Fortunately, research about teaching has now attained a level of sophistication that supports stable conclusions and generalizations about what makes for excellence. (1996, p. 110)

Weimer (1997) is somewhat more tempered about the availability of good research that informs teaching, but she emphasizes the link between valuing teaching and articulating its dimensions:

... Teaching is valued and improved when practice is informed, when it is predicated on assumptions for which there is aware-
ness, when it questions and seeks answers, and when its practitioners grow, change and move to more sophisticated levels of skill. (p. 55)

To promote the value and improvement dimensions that Weimer stresses, I aim to describe what scholars have discovered in their searches to define teaching effectiveness. My intent is to examine the assumptions behind the knowledge base that some claim already exists. The study is not a meta-analysis, in that it does not work with studies within a tradition of inquiry, but rather seeks to set representative meta-analyses and summaries from different traditions side by side. My goal is to explore how these findings can be used in the practical decisions that are being made about teaching effectiveness every day.

**Studying the Characteristics of Effective College Teaching**

What is the body of research to support scholars’ claims that specific characteristics of effective teaching already have been identified? Past work in this area can be classified into seven types of approaches that I have selected for review: (a) observation or interviews of teachers generally thought to be excellent or whose teaching evaluations by students or peers is high; (b) content analysis of letters of nomination for awards; (c) student or faculty opinion surveys; (d) factor analysis of student ratings of instruction; (e) experimental or naturalistic studies linking teaching characteristics with student achievement; (f) review of the literature or expert opinion; and (g) conceptual/logical arguments from learning theory.

*Observations or Interviews With “Excellent” Teachers*

Observational studies of teaching effectiveness are attempts to describe teaching behaviors exhibited in a natural setting and to associate them with teaching effectiveness as assessed by teaching awards, global student ratings, or some measure of instructional outcome. Rather than take a more inductive approach to observation, these studies generally rely on rating checklists that are generated in advance of the study. An example of a more inductive study is the work by Ebro (1977), whereas the studies by Lowman (1996) rely on checklists. Ebro observed teachers who had won the distinguished teaching award at one Midwestern public research university, while Lowman observed and interviewed those generally considered excellent teachers by students or peers in several elite southeastern universities. Lowman clustered the characteristics that he
observed into two categories, intellectual excitement and interpersonal rapport, arguing that his sample of effective teachers excelled on at least one of the two and were moderately competent in all other areas within the categories. Both Ebro's and Lowman's lists of characteristics are in Appendix A.

Murray (1997) reviewed 11 observational studies using low-inference descriptors conducted between 1964 and 1986, including several of his own. He concluded that these studies, some that focused on exemplary teachers and some that did not, all identified descriptors that he classified within three dimensions as closely associated with effective teaching: enthusiasm/expressiveness, clarity of explanation, and rapport/interaction. The low-inference behaviors associated with these dimensions in Murray (1985) are listed in Appendix A.

Content Analysis of Letters of Recommendation

In addition to his observational studies, Lowman (1995) attempted to arrive at common characteristics of teaching effectiveness by compiling lists of terms used in letters of nomination for teaching awards. He identified 39 descriptors, which fit into an expanded category set of four dimensions—intellectual excitement and interpersonal rapport, mentioned above, and two others, effective motivation (helpfulness, encouragement, challenge, fairness) and commitment to teaching (dedicated)—as well as a group of general positive descriptors. Terms similar to those within this expanded set had previously been identified in studies of awards nomination materials by Donaldson (1988) and Goldsmid, Gruber, and Wilson (1977). The aim of these studies is to describe what characteristics emerge from a consensus of those students, peers, and administrators who write letters regarding effective teaching.

Student or Faculty Opinion Surveys or Interviews

Other studies ask faculty and students directly about the characteristics of effective teaching. For example, Feldman (1976) gathered data from students on the characteristics of superior teachers. Marsh (1986) asked students to rate their best and worst teachers in order to identify characteristics of effectiveness. Both scholars used findings from these studies to support the development and refinement of student ratings instruments. Marsh and Dunkin (1997) mapped these characteristics, finding congruity across instruments within such areas as instructor enthusiasm, organization/clarity, learning/value, individual rapport, workload/dif-
faculty, breadth of coverage, assignments/readings, and examinations/grading. Lowman (1994) employed a similar method by asking students to rate very good, average, and very poor instructors they had experienced, using a list of 39 descriptors from his previous studies of teaching effectiveness. Students made clear distinctions among the types of teachers, ranking the very good teachers high on adjectives within Lowman's four categories of intellectual excitement, interpersonal concern, effective motivation, and commitment to teaching, as well as on general positive descriptors. Entwistle and Ramsden (1983) interviewed students about conditions that led to successful learning, eliciting a list that included good teaching strategies, clear goals, appropriate workload, appropriate assessment, and an emphasis on independence. Ramsden (1992) later went on to enumerate teaching behaviors associated with deep learning within each of these dimensions (see Appendix A).

Factor Analysis of Student Evaluations of Teaching

Many studies have looked at rating items from student evaluations of instruction, seeking to determine those items most frequently associated with effective teachers by correlating the items with overall scores of effectiveness. Two recent summaries describe this research. Feldman (1997) reviewed these studies and presented the results of his meta-analysis based on a list of 28 logically derived items from past studies. The top-10 descriptors related to global perceptions of teaching effectiveness were as follows: teachers' preparation, organization, and clarity; the perceived impact of instruction; teachers' stimulation of interest and openness to opinion, availability, and speaking skills; the clarity of course objectives and requirements; and teachers' knowledge of the subject, concern with student progress, and enthusiasm. When Feldman (1997) examined rating item scores in light of correlation with student achievement, the characteristics noted above shifted slightly. Teachers' openness to opinion and availability were replaced by intellectual challenge and enthusiasm. Correlations between the two lists were high, however, leading to the belief that ratings items are helpful in identifying characteristics of effective teaching.

In another review, Abrami, d'Apollonia, and Rosenfield (1997) focused on 43 multi-section validity studies as being the strongest way to study the relationship between teaching and student learning. Four factors emerged as a common structure behind the instruments used in these studies, two of which—instructional role and instructor as a person—the authors found to be highly correlated with instructional effectiveness.
Specific descriptors within these factors are listed in Appendix A. Considered less important were factors clustered under the heading of Instructor as Regulator (evaluation and feedback) and a fourth factor that included knowledge of domain, choice of required materials, and objectives.

**Experimental or Naturalistic Studies**

A large number of correlational, experimental, quasi-experimental, and naturalistic studies have examined the effects of particular teacher characteristics or teaching approaches on student learning. McKeachie (1990) reviewed this research more than a decade ago, concluding that the findings can indeed inform teaching practice and, hence, our understanding of the characteristics of effective teachers. Since that time, studies have continued to probe the relationship between particular characteristics of teachers or teaching approaches and student learning. Due to the large number of variables involved and the specific nature of the treatments, this literature is voluminous. While it has not often been summarized, one example has been provided by Murray (1997), who looked at a group of such studies that explored effects related to instructor enthusiasm and clarity using low-inference behavior statements to assess the presence of these characteristics. He documents positive relationships between these and student achievement across the studies.

**Review of the Literature or Expert Opinion**

Many lists of the characteristics of effective teaching are attributed to "findings in the research literature" or to the consensus of experts in college teaching and learning. While most of these compilations do not provide specific sources, those that do refer to summaries by others or sometimes to the substantial body of recent research on student learning by cognitive psychologists. An older example of this type is the study by Sherman, Armistead, Barksdale, Fowler, and Reif (1987), which explored the existing literature and provided support for five dimensions of teaching effectiveness: enthusiasm, clarity, preparation/organization, stimulation of students' interest in the subject matter, and the love of knowledge.

An often-cited list is the Wingspread document on the "Seven Principles for Good Practice in Undergraduate Education" (Chickering & Gamson, 1987). The seven principles are the use of active-learning strategies, having frequent contact with students, providing prompt feedback,
having high expectations, promoting cooperation among students, supporting time on task, and respecting diverse talents and ways of knowing. Describing the origins of the list, Gamson (1991) states that it originated at a meeting where experts were charged with identifying research-based principles of good practice. The linkages to the research literature were later articulated by Sorcinelli (1991).

Another example of expert opinion, the report of the Committee on Recognizing, Evaluating, Rewarding, and Developing Excellence in Teaching of Undergraduate Science, Mathematics, Engineering, and Technology (Fox & Hackerman, 2003), cites five characteristics of effective teaching. In a third such report, commissioned by an Australian Committee on recognizing and rewarding good teaching, Ramsden, Marginson, Martin, and Clarke (1995) included a list of teacher qualities with substantial references to the literature. (See Appendix A for details on both lists.)

**Conceptual Arguments**

Some scholars have attempted to base characteristics of effective teaching on logical connections to research on learning. In one such study, Roche and Marsh (2002) describe using a set of 10 general principles based on the work of adult learning theorists to evaluate items on a teacher self-concept scale. For example, they link the use of scale items on feedback and fairness to the notions of reinforcement and motivation in the literature, reasoning that

[a]n important aspect of learning reflected in this [scale] dimension [feedback] is reinforcement, in the form of knowledge of results and affective consequences of that knowledge. Students' perceptions of fairness and relevance of assessment procedures are probably also associated with their motivation to learn, particularly when assessment tasks are carefully designed to provide authentic, practical experiences for [them]. (p. 195)

Murray (1997) argues the merits of linking characteristics of teaching effectiveness with theoretical concepts, citing one of his studies (Murray, 1983) as an example. In this study, he presents the argument he makes about the importance of the enthusiasm factor in this way:

Behaviors loading on the Enthusiasm factor share elements of spontaneity and stimulus variation, and thus are perhaps best interpreted as serving to elicit and maintain student attention
to material presented in class. Research in cognitive psychology indicates that attention plays a pivotal role in virtually all forms of information processing, including that which occurs in the classroom. If the learner fails to pay attention, information is irretrievably lost in the early stages of processing, and is therefore not available for subsequent storage and retrieval. (p. 181)

Similarly, Marsh and Dunkin (1997) use adult learning theory principles to provide a rationale for the use of certain dimensions of teaching on the Students' Evaluation of Educational Quality instrument, linking each factor with supporting arguments from the literature on learning.

Appraising the Studies

As this overview indicates, the literature on characteristics of effective teaching is large and varied. Does it provide adequate support for the claim that we know the characteristics of effective teaching? That is, are the studies well done methodologically? Are the study findings clear? Can the study findings be generalized to a variety of conditions? Do the studies adequately address all of the dimensions of effective teaching? I explore these questions next to assess the current state of knowledge.

Are the Studies Well Done Methodologically?

As with any body of research literature, the quality of the studies on effective teaching varies greatly. Yet within this body of work there is a group of scholars who routinely have questioned their methods, engaged in dialogue about the merits of specific study designs, and developed consistent lines of research. Careful attention to thoroughness, methodological accuracy, and critique runs throughout the literature.

The value- and opinion-laden nature of these studies should first be mentioned, not necessarily as a flaw but as a feature of the territory. Even the highly statistical studies are rooted in values and opinions. Knapper (2001), for example, observes,

[w]hen we put a general statement on an evaluation form, such as, "On the whole, how good was this teacher?" we are, in effect, asking students to use their own definition and criteria for good teaching on the assumption that worth is in the eye of the beholder. And by including questions about organization, fair grading, quality of feedback, enthusiasm, and concern for students' needs, we are imposing criteria. Even if we might not recognize the fact.
Whose criteria should count the most: those of the students (the recipients of the teaching); the faculty (who presumably have more expertise in pedagogy); some external agency, such as the government; some professional association; or an employer? (p. 4)

Observation studies that rely on the nomination of exemplary teachers, content analysis studies of letters of nomination, and consensus studies of experts all rely on values and human judgments about what makes teaching exemplary. While a study may report interrater reliability or account for variance in a multiple regression, the initial coding form or student rating instrument that shaped the nature of the inquiry was humanly constructed (sometimes based on "the literature" that originated in similar fashion, and sometimes on "logical analysis" of the investigator). Even the experimental studies rest on a notion of valued learning—whether it be performance on an achievement test, self-report of motivation, or some other gain—and frequently rely on a prespecified instrument, derived from "the literature" or "logical analysis," to code frequency of behaviors.

Are the Study Findings Clear?

Two observations might be made about this question. First, as with research into other complex human phenomena, the literature on teaching effectiveness has produced findings with broad areas of agreement as well as areas of disagreement or noncomparability. The differences within this body of research in terms of methods used, focus (course, teacher, student outcomes), sample characteristics, and ways of classifying qualities and grouping them for analysis make it difficult to draw comparisons across studies. Appendix B displays a table of selected summary studies from each research tradition I have reviewed here. The caveats of doing the comparison seem to outnumber the few observations that can be made. These observations have a familiar, very general ring:

- Instructor's content knowledge is included on some lists but not others. Perhaps this quality is taken for granted in some of the studies.

- Challenge/high expectations for students and teacher organization are associated with teaching effectiveness across these studies.
• Studies dealing with instructor presentation characteristics include the common themes of enthusiasm and clarity.

• Most of these studies mention assessment, in some cases couched in the term "feedback," as important.

• Dimensions of teacher-student interaction that are common to these studies fall under a general theme of rapport/caring.

• Some studies show concern about the learning that accrued from the courses. Again, studies that did not mention this likely assumed it or treated it logically as an impact rather than a teacher characteristic.

A second, related observation is that the constructs in the studies are often ill defined. Noting this, Murray (1997) has focused his research on low-inference behaviors. Several scholars of student ratings have taken pains to list the wording of specific items that constitute the dimensions they are exploring as they collapse enormous databases of items into manageable clusters. As a result of this grouping, differences emerge. For example, some differentiate between teachers' enthusiasm for the subject and their enthusiasm for learners, whereas others treat enthusiasm as a single construct. Hativa (2001) recommends breaking down concepts (in her case, clarity) into categories, subcategories, and classroom behaviors. She argues that this work not only would enable researchers to more clearly note the presence or absence of the characteristic as they judge its effect on learning, but also would generate specific information helpful to those who are using the findings to make judgments about teaching quality or to coach faculty.

Can the Study Findings Be Generalized to a Variety of Conditions?

Some studies have looked specifically at this question. Marsh and Dunkin (1997) explored the different ways that students from different countries rate instructional effectiveness and found consistency. Erdle and Murray (1986) looked at the relationship between teacher behaviors and instructional effectiveness across disciplines and also found few differences. Student ratings scholars, on the other hand, point out the limited applicability of findings based on specific rather than global characteristics of teaching effectiveness. Of particular concern are differences between instructional approaches. Abrami et al. (1997) offer an example:
The distinctiveness of cooperative learning compared with lecturing suggests that the specific instructional processes involved will be different. For example, in whole class instruction almost all of class time is devoted to the instructor talking and students listening. Clarity of explanation should be more important in classes designed for lecturing than in classes where the instructor presents for only a portion of the time. (p. 334)

Do the Studies Adequately Address All of the Dimensions of Effective Teaching?

The major focus of much of the literature on effective teaching, by far, is on classroom performance. Most studies focus more on two dimensions—lecturing and teacher-student interaction—than on any others. Many studies include consideration of the content knowledge, course design, or assessment components of effective teaching, but often these are either not given major attention or they are defined multidimensionally.

There are, in addition, entire areas of teaching effectiveness that are not discussed in the literature. For example, some characteristics may be considered foundational, in that they enable or motivate instructors to act in ways that facilitate learning well or to make contributions to the profession. These characteristics include intellectual curiosity about learning theory, effort and skill devoted to the scholarship of teaching and learning, desire to improve one's effectiveness as a teacher and effort devoted to this end, willingness and ability to advance the effectiveness of others through mentoring and coaching peers, and effort and ability devoted to curriculum or educational development activities at the program or campus level.

For example, McKeachie and Cohen's (1980) classic list of dimensions of teaching performance includes departmental leadership for teaching. McAlpine and Harris (2002) list personal and professional development considerations as well as departmental leadership as important elements of teaching effectiveness. Elton (1998) lists the scholarship of teaching and learning, contributions to teaching development both nationally and internationally, and coaching other teachers as typical activities of exemplary teachers. Bess (2000), Hounsell (1996), Cashin (1989), and Paulson (2002) list program and curriculum development as well, and Cashin lists administrative requirements involved in teaching as another area for discussion. Paulson (2002) identifies advising as a potentially applicable area when advising is done by faculty and not by professional staff
advisors. Fox and Hackerman (2003) and Hounsell (1996) list contributions to the profession.

These scholars are careful to point out that no one teacher excels in—or even engages—all of the domains of teaching effectiveness. In fact, both Bess (2000) and Paulson (2002) argue that assignments should be shared across faculty in a unit according to individuals' strengths, with some instructors specializing in course design, others in tutoring or coaching, and the like. Institutional mission also is likely to influence the priority placed upon these various categories. However, because there is general agreement that effective teaching is more than classroom performance, it would be remiss not to consider the entire range.

Finally, in the research on teaching effectiveness characteristics in higher education there is a lack of attention to the study of personality factors, knowledge, prior beliefs, and conceptions that lead to teacher behaviors. Trigwell (2001) posits a model of university teaching that shows how context, teacher thinking, teacher planning, and teaching strategies all are aligned, arguing,

> When views are expressed that the making of judgements about teaching [is] difficult, and that there is no best way to teach, they are usually being derived from a limited focus on what constitutes teaching. . . . But when teaching is viewed more holistically . . . the combination of elements (especially teachers' conceptions of teaching and a focus on the students) make the differences between teaching qualities more discernible and judgements [sic] easier. (p. 67)

Hativa and Goodyear (2002), for example, trace ineffective teaching behaviors to gaps in pedagogical knowledge, misinformed goals, inaccurate conceptions and beliefs, as well as personality factors. Kember (1997), Prosser and Trigwell (1999), and Ramsden (1992), echo the work of earlier scholars such as Axelrod (1970) and Katz (1985) in arguing that arriving at teaching effectiveness involves developmental stages. These stages generally are characterized by approaches that move from viewing teaching as information transmission (content focus), to a focus on instructional strategies (teacher focus), to, finally, a focus on student intellectual development (learner focus). Yet another dimension of teaching effectiveness was noted earlier by Fuhrmann and Grasha (1983), who suggest that teachers' actions are linked to their behaviorist, constructivist, or humanist assumptions. All theorists note that these basic belief structures are highly related to teaching behaviors.

Although not always stated explicitly across all studies in this literature, several other dimensions—learner-centered approaches; reflective
practice that examines and articulates the foundational beliefs about the nature of student learning and links it to pedagogical practice; and high self-esteem, open-mindedness, and a general positive attitude toward students—all are linked with teaching effectiveness. Yet these rarely are mentioned in teaching effectiveness studies focusing on classroom performance.

Part of the reason for these differences in how effective teaching is characterized may be historical. Changes in the range of approaches thought to be appropriate to the study of teaching effectiveness, attention to teacher beliefs and thinking in the precollegiate teacher education literature, and developments in cognitive science that have influenced the way teaching itself is conceptualized all have led to studies that are quite different in scope and approach than their predecessors. The current focus on the learner, rather than the teacher, that has captured the attention of higher education (Barr & Tagg, 1995) deemphasizes the “teaching as telling” models of instruction that often were the basis for previous studies of effectiveness.

Bridging Definitional Despair and Certainty

This review of the literature on the characteristics of effective teaching has illustrated both the strengths and shortcomings of the current state of the field. It suggests there are advantages to taking a middle position between definitional despair and certainty. On the one hand, those who make unqualified statements indicating that research has identified invariant, known characteristics of teaching effectiveness appear overconfident, while on the other, those who claim that one can never know about these characteristics seem unduly pessimistic.

It is important to consider both what types of knowledge one can have about the topic of effective teaching and how this knowledge can be used. Guba and Lincoln (1981) list a number of paradigms for “getting at truth” (pp. 54-55), with examples of the fields in which they predominate:

- **Logical paradigm**: based on consistency to internal axioms (such as mathematics)
- **Scientific paradigm**: based on confirmability of hypotheses (such as physics)
- **Naturalistic paradigm**: based on field study of phenomena (such as ethnography)
• Judgmental paradigm: based on expert opinion (such as connoisseurship of wine or athletic judging)

• Adversarial paradigm: based on arguments and counterarguments (such as law)

• Modus operandi paradigm: based on sequential tests (such as forensic pathology)

• Demographic paradigm: based on indicators (such as economics)

Although some elements of the scientific and naturalistic paradigms are inherent in the attempts scholars have made to know the characteristics of effective teaching, it is clear that the role of judgment is paramount, both in conducting the studies and in making decisions based on the results. But judgments must be informed. Eisner (1979), who has long advocated an approach to educational judgments that he terms "connoisseurship," stresses knowledge of educational research as well as an examination of values in the making of educational decisions. Stake and Cisneros-Coheneur (2000) agree:

We feel uncomfortable with simple scales and notions of causal links. Intuition and conscious reasoning should not be overrun by ratings, indicators, characteristics, or lists of duties. Evaluation of teaching requires personal interpretation and judgment—not necessarily in place of criteria, categories, and indicators but, especially, after them. Judgment should be the pinnacle of evaluation. Rather than put final effort into refining dimensions, we think that more effort should be put into improving judgment. All practicing evaluators should seek understanding about the particular teaching by studying it from different points of view and frames of reference, by submitting it to challenge and review. In this way, the complex merits of teaching will not be lost in a simple indicator. Rather context-relevant discussion of multiple meanings of quality is made possible. Through dialectic critique, we can improve intuition, quality recognition, and judgment. (p. 61)

The ability to make informed decisions in context is a theme that emerges as a characteristic of both effective teachers and judges of teaching effectiveness. Light and Cox (2001), who discuss the awareness of learning and teaching effectiveness in higher education, distinguish between the individualistic and skills paradigms—which stress trial and error learning and a focus on tips for performance and communication skills—
and the professional paradigm, which relies on higher order intellectual judgment to guide the acquisition, extension, and application of specialized knowledge. This emphasis on inquiry and professional decision making in teaching is echoed by others who emphasize a reflective practitioner model of teaching.

For those who need to make decisions on effective teaching, being informed not only requires knowledge of the emergent patterns in the literature, but also demands thoughtful consideration of them. Angelo (1996) comments:

> While research on teaching, learning, and assessment can help us identify critical criteria and indicators and offer guidelines for good practice, neither research nor guidelines can tell a particular department or institution which criteria or indicators to focus on or exactly how to apply the guidelines. Assessing and evaluating teaching effectively requires knowledge of and sensitivity to the individuals and groups involved, the local context, and the academic and administrative culture of the institution. In short, it requires the exercise of professional judgment. (p. 62)

An additional aspect of the task of defining teaching effectiveness is the critical dimension pointed out by Cranton (2001). Arguing from Habermas’s (1971) distinctions among technical, practical, and emancipatory knowledge, Cranton emphasizes the critique that must be brought to bear on these activities—a questioning of assumptions and values, an exploration of power and privilege, a continuing interrogation of taken-for-granted assumptions.

The role of local dialogue and consensus in defining effective teaching is important in the cultivation and exercise of the professional judgment that is being proposed. Conversations about teaching within the context where decisions are to be made facilitate the sharing of research-based knowledge and the articulation of a framework within which decisions can be made. Such educated discussion can inform many activities:

- Determining the curriculum of teaching development experiences, such as teaching assistant courses or workshops, new faculty orientations, faculty development workshops
- Screening and choosing applicants for faculty positions
- Constructing professional development plans
• Annual reporting of faculty work
• Student and peer evaluating of teaching
• Constructing promotion and tenure dossiers and deliberating about candidates' performance
• Developing teaching awards program criteria

Faculty conversations about effective practice can reinforce a culture of professionalism in teaching, one in which it is desirable to seek to understand practice; admirable to be thorough and intentional in making judgments about teaching; and possible to learn from others about the behaviors, assumptions, and attitudes that have been found to be most productive in facilitating student learning. Such dialogue bridges the gap between definitional despair and certainty and turns it into an advantage.

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Appendix A
Characteristics of Teaching Effectiveness Identified by Various Studies

Ebro (1977) concluded from her observation of award-winning teachers that they
- are businesslike, on task.
- are organized.
- teach at an appropriate pace.
- check students’ comprehension.
- use a variety of instructional strategies.
- stay focused on topic and objectives.
- provide clear explanations.
- use humor.
- practice good classroom management through gaining attention and respect.
- use corrective feedback.
- praise students’ answers, probe for more detail.
- create a warm climate by allowing students to speak freely.
- use nonverbal behavior to reinforce points.
Appendix A
Characteristics of Teaching Effectiveness Identified by Various Studies (continued)

Lowman (1996) found that faculty nominated as excellent teachers could be classified into two major categories:

1. Those who generate intellectual excitement. They
   • speak energetically.
   • use gesture and movement.
   • exhibit high creativity.
   • take an integrative intellectual perspective.

2. Those who generate interpersonal rapport. They
   • show strong positive attitudes toward students as people.
   • encourage interaction within and outside class.
   • use students’ names.
   • have a warm and positive manner.
   • take a democratic rather than autocratic approach.
   • give students options.
Murray (1985) associated low-inference behaviors with three dimensions of effective teaching:

1. Enthusiasm/expressiveness. The teacher
   - moves about while lecturing.
   - speaks expressively.
   - uses humor.
   - shows facial expressions.
   - gestures with hands and arms.
   - does not read from lecture notes.

2. Clarity of explanation. The teacher
   - stresses important points.
   - gives multiple examples.

3. Rapport/interaction. The teacher
   - knows students' names.
   - encourages questions/comments.
   - asks questions of the class.
   - praises students for good ideas.
   - addresses students by name.
   - is friendly, easy to talk to.
Appendix A

Characteristics of Teaching Effectiveness Identified by Various Studies (continued)

Ramsden's (1992) six principles of effective teaching, based on student interview data, are

1. Interest and enthusiasm.
2. Concern and respect for students and student learning.
3. Appropriate assessment and feedback.
5. Independence, control, and active engagement (of learners).
6. Learning from students.
Abrami, d’Apollonia, and Rosenfield’s (1997) two main factors associated with effective teaching contain the following components:

**Factor I: Instructional Role**

- Choice of supplementary materials
- Relevance of instruction
- Overall course
- Monitoring learning
- General knowledge and cultural attainment
- Research productivity and reputation
- Motivating students to greater effort
- Enthusiasm for teaching
- High-level cognitive outcomes
- Clarity of instruction
- Stimulation of interest
- Preparation
- Management style
Appendix A
Characteristics of Teaching Effectiveness Identified by Various Studies (continued)

Abrami, d’Apollonia, and Rosenfield (1997) (continued):

**Factor II: Instructor as a Person**
- Personal appearance, health, and attire
- General attitudes
- Dramatic delivery
- Concern for students
- Vocal delivery
- Answering questions
- Knowledge of teaching
- Tolerance of diversity
- Availability
- Overall instructor
- Interaction and discussion
- Respect for others
- Enthusiasm for students
- Friendly classroom climate
- Enthusiasm for subject
- Personality characteristics
The Committee on Recognizing, Evaluating, Rewarding, and Developing Excellence in Teaching of Undergraduate Science, Mathematics, Engineering, and Technology (Fox & Hackerman, 2003) lists five characteristics of effective teaching:

1. Knowledge of and enthusiasm for subject matter
2. Skill, experience, and creativity with a range of appropriate pedagogies and technologies
3. Understanding of and skill in using appropriate testing practices
4. Professional interactions with students within and beyond the classroom
5. Involvement with and contributions to one's profession in enhancing teaching and learning
## Appendix B

Findings of Selected Types of Studies of Teaching Effectiveness Compared
(see notes below for details)

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<thead>
<tr>
<th>Study/Type</th>
<th>Subject Matter Knowledge</th>
<th>Instructor Presentation</th>
<th>Course Design and Planning</th>
<th>Assessment</th>
<th>Interaction With Students</th>
<th>Other</th>
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<tbody>
<tr>
<td>Murray (1985): Observational study summary</td>
<td></td>
<td><strong>Enthusiasm</strong></td>
<td></td>
<td></td>
<td><strong>Rapport</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Moves about while lecturing.</td>
<td></td>
<td>• Asks questions of class.</td>
<td>• Knows students' names.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Speaks expressively.</td>
<td></td>
<td>• Praises students.</td>
<td>• Addresses students by name.</td>
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<tr>
<td></td>
<td></td>
<td>• Uses humor.</td>
<td></td>
<td></td>
<td>• Is friendly, easy to talk to.</td>
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<td></td>
<td></td>
<td>• Shows facial expressions.</td>
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<td></td>
<td></td>
<td>• Gestures with hands and arms.</td>
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<td></td>
<td></td>
<td>• Does not read from lecture notes.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Clarity</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Stresses important points.</td>
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<tr>
<td></td>
<td></td>
<td>• Gives multiple examples.</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td><strong>Lowman (1995): Content analysis of award nomination</strong></td>
<td><strong>Knowledgeable</strong></td>
<td>• Humorous&lt;br&gt;• Interesting&lt;br&gt;• Clear&lt;br&gt;• Exciting&lt;br&gt;• Enthusiastic&lt;br&gt;• Organized</td>
<td><strong>Challenging</strong></td>
<td>• Interpersonal concern&lt;br&gt;• Helpful&lt;br&gt;• Encouraging&lt;br&gt;• Caring&lt;br&gt;• Available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ramsden (1992): Interview study basis</strong></td>
<td><strong>Interest and enthusiasm</strong></td>
<td>• Clear goals and intellectual challenge&lt;br&gt;• Independence, control, and active engagement</td>
<td><strong>Appropriate assessment and feedback</strong></td>
<td><strong>Concern and respect for students and student learning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Feldman (1997): Factor analysis of student rating items</strong></td>
<td><strong>Knowledge of subject</strong></td>
<td>• Clarity and understandability&lt;br&gt;• Stimulation of interest in course and subject&lt;br&gt;• Eloquency skills&lt;br&gt;• Enthusiasm for subject</td>
<td><strong>Preparation and organization</strong></td>
<td>• Motivation of students&lt;br&gt;• Concern with class progress&lt;br&gt;• Encouragement of questions, discussion&lt;br&gt;• Openness to opinions&lt;br&gt;• Availability and helpfulness&lt;br&gt;• Perceived outcome or impact of instruction&lt;br&gt;• Meeting of course objectives</td>
<td><strong>Sensitivity to class progress</strong></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B
Findings of Selected Types of Studies of Teaching Effectiveness Compared (continued)
(see notes below for details)

<table>
<thead>
<tr>
<th>Study/Type</th>
<th>Subject Matter Knowledge</th>
<th>Instructor Presentation</th>
<th>Course Design and Planning</th>
<th>Assessment</th>
<th>Interaction With Students</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chickering &amp; Gamson (1989): Expert consensus</td>
<td></td>
<td></td>
<td>• Time on task</td>
<td>Prompt feedback</td>
<td>• Frequent contact with students</td>
<td>• Respect for diverse talents and ways of knowing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Cooperation among students</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• High expectations</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Active learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roche &amp; March (2002): Conceptual analysis</td>
<td>• Enthusiasm</td>
<td>• Breadth of coverage</td>
<td>• Examinations/grading</td>
<td>• Group interaction</td>
<td></td>
<td>Learning/value</td>
</tr>
<tr>
<td></td>
<td>• Organization/coverage</td>
<td>• Assignments/reading</td>
<td></td>
<td>• Individual rapport</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clarity</td>
<td>• Workload/difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Notes.

1. This table is intended to display results across representative types of studies. Comparison is somewhat arbitrary since the studies themselves are from different time periods, used different methods, defined and grouped constructs differently, and are focused on different purposes. Terms used in the reports are sometimes shortened and are grouped in more than one category when the meaning of the term was not specific enough to determine a single category. They are cited in the form used in the study rather than being converted to parallel structure.

2. Studies were selected to represent each of the categories of studies explored in this article. When possible, studies were chosen for their emphasis on summarizing other studies in the genre. No such recent summary is available of the experimental and naturalistic studies, which tend to focus on particular qualities or interventions, rather than on an array. Thus, this category is not included. Items were placed on the chart on the basis of decision rules for each study:

   Murray (1997): Used as an example of the observation method, based on the table on p. 182 that summarizes past studies. Descriptors used in this appendix were in those three dimensions that Murray isolates as strong predictors of instructional outcome: enthusiasm/expressiveness, clarity of explanation, and rapport/interaction.

   Lowman (1995): Used as an example of content analysis of award nominations method. Extracted from table of descriptors on p. 32 of study. Descriptors with 20 or more mentions were used in this appendix.

   Ramsden (1992): Used as an example of opinion survey, based on its derivation of teacher characteristics from the study of student opinion by Entwistle and Ramsden (1983).

   Feldman (1997): Used as an example of factor analysis. Items chosen were in the categories of “High Importance” and “Moderate Importance” on the summary chart on p. 384.


   Roche & Marsh (2002): Used as an example of conceptual analysis, based on the discussion of congruity of items in the literature on adult learning (pp. 193-196).