

Many business schools are recognizing the critical importance of developing students' managerial and interpersonal skills. Yet, it is not enough to attempt to teach the skills. There must also be efforts to measure skill development. Assessing student interpersonal skills serves two primary functions—student development and program assessment. In this chapter we clarify what is meant by managerial interpersonal skills and suggest possible assessment approaches including assessment centers and 360-degree feedback.

CHAPTER 7 ASSESSING THE UNASSESSABLE: INTERPERSONAL AND MANAGERIAL SKILLS

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Background, Mission, and Goals

In the past decade, an increasing focus on skill development in undergraduate and graduate business curricula has emerged (e.g., Bigelow, 1995; Bigelow, Seltzer, van Buskirk, Hall, Schor, Garcia, & Leleman, 1999; Boyatzis, Stubbs, & Taylor, 2002). A number of important factors are likely to have contributed to this heightened awareness of skill education. The now well-known research by Porter and McKibbin (1988) clearly illuminated the necessity for business schools to improve their ability to teach management, leadership and other interpersonal skills. Similarly, surveys of corporate recruiters routinely cite interpersonal and leadership skills at the top of the skills most desired in graduates (e.g., Eberhardt, McGee, & Moser, 1997). Recently, well-known management scholars have been highly critical of the overall value of most MBA programs (Pfeffer & Fong, 2002) and cite their relative lack of practical and economic merit. Further, the American to Advance Collegiate Schools of Business (AACSB) publishes accreditation standards that encourage schools to support their claims that skills are being inculcated with formal assessments measuring those skills. Though these standards used to be quite broad, the most recent AACSB standards require institutions to complete assurance of learning measures that determine *direct* educational achievement (Thompson, 2004). Thus, institutions which state that they train certain managerial skills must present primary evidence that those skills have indeed been learned.

In response to these trends, many schools now teach managerial skills and offer skill-based management courses (Bigelow *et al.*, 1999) or, at the very least, supplement their traditional organizational behavior and human resource management courses with skills activities and exercises. If

management skills are to be developed, a key component of that process involves feedback. Students need opportunities to practice their managerial skills in realistic situations and receive feedback on those skills (Whetten & Cameron, 1995). Skill assessment is important in identifying current levels of competence and serves as an important catalyst for change. As students practice their developing skills, it is important to provide ongoing feedback. Feedback should be based on objective, accurate and credible measurement of skills. Thus, assessment of managerial skills plays a key role in management development.

Although many institutions are beginning to integrate skill-based education, rigorous skills assessment reflective of the skills being taught has been slower to develop (McConnell & Seybolt, 1991; Riggio, Mayes, & Schleicher, 2003) and for good reasons. Rigorous evaluative techniques are not necessarily “intuitive,” thus making it difficult for academics and administrators to distinguish best practices from malpractices. In addition, much confusion exists regarding what constitutes managerial skills. For example, many confuse student personality or attitudes with managerial skills. This confusion regarding what constitutes skills often leads to mistakes in assessing those skills.

Further, despite overwhelming evidence that deployment of management skills via human resource management practices has a strong impact on organizational productivity and performance (e.g., Huselid, 1995), the practices remain characterized as “soft,” “elusive,” and “unassessable,” and are often seen as without practical merit (Rynes & Trank, 1999). Thus, resources granted to “soft skill” evaluation as part of a larger program of student assessment may be viewed as unnecessary or unattainable. Rynes Trank, Lawson and Ilies (2003) remarked, “...we are a long way from showing that students who take courses in organizational behavior...behave any differently or perform more effectively than those who haven’t” (p. 279). The lack of behavioral change evidence is partly a function of measurement issues. That is, it may be a testament to the difficulties that accompany assessment and development of interpersonal skills. Indeed, these skills are not only difficult to measure—they may take a lifetime to master.

Given the complexity present in developing management skills and the contextual factors presented above, the purpose of this chapter is two-fold. First, we seek to clarify what is meant by managerial skills and skill assessment. In particular, we will draw distinctions between the various types of assessment that exist and the purposes they serve. We devote most of our discussion to interpersonally-oriented managerial skills, as they are often seen as the most elusive and “unassessable.” Second, relying on research and our practical experience in assessment, we elaborate on two methods for assessing interpersonal skills that have great promise for increased usage in academic settings: assessment centers and 360-degree assessments. These two methods have their roots in organizational assessment techniques

and show enormous potential to contribute to the educational assessment arena.

Defining & Assessing Interpersonal Skills

Virtually all business schools claim to develop some form of students' interpersonally related skills and rightfully so—interpersonal skills matter. Research by the Center for Creative Leadership (CCL) showed that among junior executives identified as “high potentials,” many failed to be promoted into executive roles (i.e., were derailed) despite enormous resources provided to them. CCL found among these derailed high-potentials, there were great problems with interpersonal relationships, inabilities to build and lead a team, and failure to develop or adapt to change. These findings are not unique to the case of derailed executives. Research in the leadership literature, for example, has shown that specific interpersonally related leader behaviors are strongly related to employee performance and commitment (Judge & Piccolo, 2004). Further, among college students, Waldman and Korbar (2003) found that students with increased levels of interpersonal skills were more likely to have higher starting salaries, more promotions over a five-year period and higher job satisfaction. Clearly, interpersonal skills are important for students' future success, and resources spent towards development and assessments of interpersonal skills are fully justifiable.

The term “skill” is used to characterize a specific behavior or set of behaviors that can be learned and repeated with consistent results. Business students develop many skills throughout their studies, including highly technical ones such as financial calculations, economic analyses and software operation. These are learned through practice in the classroom and reinforced over time to provide consistent results. The constellation of skills known as “interpersonal” is no different; they involve specific behaviors performed with consistent results. The difference of course between technical skills and interpersonal ones is that interpersonal skills necessarily involve other people, whether through interaction or in the context of other people (i.e., managing one's self in relationship to others). Some behaviors that demonstrate interpersonal skills include clarifying the task, communicating clearly, and seeking input from others.

Interpersonal skills differ greatly from student knowledge and ability. Knowledge represents an organized body of information obtained through education or experience. Abilities represent aptitudes or capacities to perform a certain behaviors. Thus, skills represent some form of “doing.” While it is true that knowledge and ability are sometimes prerequisites for learning and performing a skill, they are by no means direct measures of the skill itself. As Mintzberg (1975) noted some 30 years ago: “Management schools will begin the serious training of managers when skill training takes its place next to cognitive learning. Cognitive learning is detached and informational, like reading a book or listening to a lecture. No doubt important cognitive material must

be assimilated by the manager-to-be. But cognitive learning no more makes a manager than it does a swimmer” (p. 60).

Just as knowledge and ability do not represent direct measures of skills, neither do individual differences such as attitudes, values, motivations and personality characteristics demonstrate skill. These broad sets of individual differences represent a complex interaction between an individual’s experiences in the world and genetic predispositions. Although some individual differences such as personality are often similar in focus to a specific skill, and may be a necessary condition, they do not constitute possession of a skill. For example, the personality trait of extraversion describes an individual’s predisposition towards sociability and talkativeness. Extraversion may be quite helpful to an individual who is performing the skills associated with oral communication. However, extraversion itself does not guarantee possession of oral communication skills, nor ensure that an individual will execute the skills appropriately. The same can be said for attitudes and values. Possession of a certain attitude or value may facilitate the performance of the skill, but it is not a measure of the skill.

These distinctions above are not simply “splitting hairs”—they are important in that possessing an ability to perform a skill, being predisposed towards the skill, and/or knowing about the skill, are far different than actually *performing* the skill. When these distinctions are not carefully considered, the interpretation of skills assessment is likely to lead to flawed conclusions. That is not to say that personality measures, for example, are not useful. To the contrary, such measures hold enormous potential for helping students develop a strong sense of self-awareness about their preferences and behavioral tendencies, and we would recommend them as part of an overall development program.

Towards Interpersonal Skill Assessment

Business schools have excelled at assessing students’ ability and knowledge while doing relatively little in the skills area. For example, we screen applicants closely, using ability measures such as SATs, ACTs, or GMAT scores. Similarly, we are well-equipped to test student knowledge through examinations of facts, what Anderson (1985) called *declarative knowledge*. Although critically important within a program of assessment, declarative knowledge measures focus heavily on cognitive-type learning (Bartels, Bommer & Rubin, 2000; Waters, Adler, Hartwick, & Poupart, 1983) to the exclusion of affective and skill-based learning (Kraiger, Ford & Salas, 1993). Here again, we are not suggesting that evaluation of students’ “technical skills” (e.g., database management, financial calculations, etc.) is not important; rather, they are more readily measurable through traditional assessments and represent a great deal of declarative knowledge. Thus, it is imperative to closely examine what assessment techniques are tapping. For example, Table 1 lists many of the measurement methods used by business

schools to purportedly measure interpersonal skills. Several of these approaches measure behaviors directly (e.g., assessment center, 360-degree feedback, peer evaluations of class projects), while others clearly measure something other than behavior (e.g., personality inventories).

In thinking about the approaches to measuring interpersonal skills, we recognize that for many institutions, interpersonal skill assessment represents a tradeoff between administrative burdens and behavioral assessment. When comparing the different approaches to measuring interpersonal skills, it is important to consider the costs of administration. These costs may include time to develop or obtain, coordinate and administer the assessment process. Many of the paper and pencil techniques are readily available and can be administered and scored rather quickly. For example, personality inventories and peer evaluations of group projects may be easy to obtain or develop and easy to administer. The development of an interview is a straightforward task, but conducting individual interviews can require significant amounts of time; thus we categorize it as having moderate administrative costs. Other forms of assessment (360-degree feedback and assessment centers), on the other hand, can often be quite burdensome, requiring significant amounts of time to develop and administer. Thus we categorize them as being high on administrative costs.

In order to provide high quality, credible feedback it is important that the feedback is based on objective data. Self-report techniques (e.g., personality inventories, interviews and other survey techniques) may be biased by impression management, social desirability, ego-protection or other distortions. Self-evaluations also tend to suffer from high levels of leniency and low levels of agreement with ratings from other sources (Harris & Schaubroeck, 1988). Of course not all self-reports are designed equally, and some make considerable efforts to make the assessment as behavioral and objective as possible (Riggio & Riggio, 2001). Interviews by virtue of their human interaction provide a forum for assessing interpersonal skills unlike the paper and pencil approaches. In Table 1, we classify peer evaluations of class projects and 360-degree feedback as moderately objective approaches. These two approaches are improvements over self-ratings, but they involve ratings by individuals who may have limited ability or motivation to provide accurate and constructive feedback. In assessment centers, feedback is based on assessor observations of standardized work simulations. Assessors have no previous knowledge of the students and can rate the behaviors as performed in the exercises. Thus, two approaches that may be the most beneficial in terms of providing high quality assessment of management behaviors are the assessment center and 360-degree feedback. Unfortunately, these two approaches are the most administratively demanding. The remainder of this paper will present experiences with these two approaches used for assessing student managerial skills and suggest ways to minimize administrative costs.

Table 1
Comparison of Methods of Assessing Interpersonal Skills

Measurement Technique	Administrative Cost	Relative Objectivity	What is Being Measured?
Personality Inventories (e.g., NEO-FFI, MBTI)	Low (easily obtained and administered)	Low (Self-report)	Personality, temperament, preference, (not interpersonal skills)
Interviews	Moderate (easy to develop, time-consuming to administer)	Low to Moderate (self-report, easily faked, but the interviewer has the opportunity to view interpersonal skills firsthand)	Varied content may include past behavior, future intentions, communication skills, skill at relating to the interviewer
Peer evaluations of class projects	Low (easy to develop and administer)	Moderate (classmates may have limited ability to provide constructive and unbiased feedback)	Peers' perceptions of behavior and contribution toward group goal
360-degree feedback	High (substantial data collection and analysis and feedback effort)	Moderate (work colleagues who may have varied motives for providing accurate feedback)	Multi-source measurement of behaviors in unstandardized situations
Assessment Center	High (substantial effort to develop, administer and provide feedback)	High (unbiased assessors who are trained to provide constructive feedback)	Assessors' perceptions of behavior in standardized and realistic work simulations

Emerging Assessment Methods

In our pursuit of innovative methods to assess interpersonal skills, we have developed a few decision criteria that have helped us to determine which skills to assess and to evaluate skill assessment methods. First, if a skill can be evaluated well using some form of traditional means, we will not revisit it. For example, knowledge tests measuring applied or procedural knowledge (e.g., determining the appropriate accounting rule to apply) are generally quite good at capturing technical skills. Second, we have narrowed our assessment of interpersonal skills to those that are inherently observable and can be reliably measured through some form of observation. Thus, we seek to assess observable behavior. Third, for an assessment method to be truly useful, it must serve as a meaningful platform for providing feedback to

students about their development, while at the same time be useful to administrators/faculty for purposes of aggregation and program evaluation. In the end, we tend to err more on the side of student-focused feedback, which likely reflects our professorial role, rather than a bias towards program evaluation.

Applying these criteria, we have had great success in both promoting skill development and assessing student outcomes through the use of assessment centers (AC) and 360-degree assessments. In particular, we have been using the AC methodology for 8 years and have assessed over 20,000 undergraduate and graduate business students from all types of universities. Recently, we also began to use 360-degree assessments in order to capture certain skills not assessable through the AC. Below; we introduce the reader to both methods and provide detailed examples from universities employing them.

Innovative Assessment Methods

Assessment Centers

An assessment center (AC), despite its name, is an evaluation and development technique, not a location. The AC was used first by the U.S. military to aid in officer selection in World War II. Soon after, it was applied in corporate settings as a managerial selection tool made popular by the results of the Management Progress Study at AT&T (Bray & Grant, 1966). Assessment centers use situational exercises (e.g., leaderless group discussion, in-basket, oral presentation) to simulate managerial jobs. While participating in the exercises, student performance is evaluated by trained observers based on demonstrations of managerial skills (e.g., oral communication, teamwork, initiative).

Thus, the assessment center provides a realistic method of evaluating assessee performance in situations similar to those encountered by managers on the job—i.e., “authentic assessment.” There is evidence suggesting that ACs are broadly used by organizations employing business school graduates (Spychalski, Quinones, Gaugler, & Pohley, 1997). In addition, research on ACs has established the methodology as a strong predictor of managerial success (Howard, 1997; Gaugler, Rosenthal, Thornton & Bentson, 1987).

Using ACs in an academic setting is not an altogether novel idea. In 1985, the AACSB in partnership with Developmental Dimensions International (DDI) employed AC technology for evaluating student managerial skills. This program, however, was discontinued after a few years due to financial burdens. However, a number of universities have successfully implemented AC technology (e.g., Alverno College, Arizona State University, California State-Fullerton, Case Western Reserve University, Central Missouri State University, Claremont-McKenna College, Indiana University, Texas Tech University, Southern Illinois University-Edwardsville, Valparaiso³²) for purposes of skill development and/or outcomes assessment. Many of these assessment

centers have been discussed in the literature and during recent conference presentations (e.g., Riggio, *et al.*, 2003).

Research on academic ACs has shown that the skills assessed and developed via AC methods are truly important for future student success. For example, Waldman and Cullen (2001) described an academic AC in which student performance was significantly related to post-college salary increases and promotions. Schleicher, Riggio and Mayes (2001) found that job performance could be predicted by assessment center performance five years post graduation. Riggio *et al.* (2003) found that 42% of the variance in rated "employability" was due to interpersonal skills, such as oral communication and leadership, measured in their assessment center. These research efforts demonstrate that academic ACs are hitting the mark with respect to the types of skills being assessed. That is, academic ACs measure important, job-related behaviors that are highly related to graduates' immediate and long-term job performance.

360 Degree Feedback or Multi-Source Feedback Assessment

Another innovative method used to assess interpersonal skills is 360-degree feedback. The term "360 degree feedback" comes from the idea that raters "in a full circle" around the target are involved with providing their input. The most common example of this model can be seen when an employee is rated by his or her boss, a number of peers, all of the people who are direct reports, and possibly even customers, clients, or other people with whom the target has frequent interaction. All of these sources of input are in addition to the self-evaluation that is provided by the person who is undergoing the 360-degree assessment.

The rise of 360-degree feedback lies in the roots of the human relations movement of the 1950s and 1960s and is an offshoot of the survey/feedback approach used at the organizational level. Thus, while traditional survey/feedback has been used to provide feedback regarding organizational processes and employee responses across large groups, 360-degree feedback programs are specifically targeted toward "feeding back" information to specific individuals (usually supervisory or managerial level employees) about their work behaviors.

While we are not aware of any specific research that has focused upon 360-degree feedback in purely academic settings, the practice is certainly not alien to the classroom. Studies have been conducted using working MBA students (Brett & Atwater, 2001), but the general idea of most of the research has been that the MBA students actually represent a varied population of organizational members. Thus, working MBA students are generally of more interest when it comes to research, because they are not "typical students." The use of multi-rater feedback, however, is common in everything from evaluating team presentations to class participation.

Assessment Models

In our experience, ACs and 360s can be used at different points in the curriculum to serve different objectives, making them flexible techniques that address a series of assessment and curricular issues. To provide a better sense of how these assessments can be used, we will present two common scenarios with which we have been associated.

Program-Focused Assessment Model

The most common approval is what we will call a *program-assessment* model.³³ Using this program-assessment approach, students are put through an assessment center or a 360-degree assessment designed to measure a targeted set of behavioral skills (e.g., leadership, decision-making, communication, teamwork, etc.) somewhere near the beginning of their business school experience. Due to practical issues (e.g., scheduling, credit hour assignment, attendance, etc.), students normally complete the assessment activity as a part of a required course (e.g., Principles of Management) that comes near the beginning of the business school curriculum. In MBA programs, this assessment tends to take place as part of the orientation or during the program's first semester, allowing early feedback to the student regarding his/her skill level. In order to serve as a value-added program assessment, this initial pre-test is followed up with a post-test that occurs near the end of the curriculum.³⁴ In undergraduate and MBA programs alike, capstone strategy courses tend to be taken by students very near the end of the program. Thus, we have found capstone courses to be practical and relevant places to capture this post-test assessment.

A common alternative in conducting program assessment is through the use of a post-test measurement alone. In this approach, there is no pre-test to assess where the students "start" in their skill-building, only a measure of where they "finish." So, much like the post-test portion of the technique described above, students near the end of their program (often in a capstone strategy course) go through an assessment to provide data used to measure their skill proficiency. This approach is useful to the students as well as the program. For the student, it provides an assessment of specific skills that they may need to develop further once they graduated.

Student-Focused Assessment Model

Another popular approach takes place within the context of a specific course. For example, a number of schools have required courses that are focused specifically on "skill development." In contrast to the program assessment model described above, these schools often utilize a *student-focused assessment* approach. In this approach, students complete an assessment activity (normally an assessment center, but occasionally a 360-degree assessment) at the beginning of a term (obviously, the dimensions used in the assessment activity are specific to the content of the skill

development course) and then receive feedback within the first few weeks of the course. This way, students are informed of their individual performance and thus have an individual benchmark against which to judge their future performance. Since the skill development course is designed to provide specific developmental opportunities, a post-test needs to occur near the end of the term so that students can be re-evaluated.

Curriculum Example: Assessment Centers

As discussed above, we have employed our decision rules regarding what skills to assess/include in an assessment center effort for Indiana University. As a result of this process, we have identified seven specific interpersonal skills dimensions we believe meet our criteria. These are broad categories of skills, each containing very specific, smaller skills. The seven skill dimensions assessed in the assessment center are: decision-making, initiative, leadership, planning, organizing, teamwork and oral communication. Certainly other important skill dimensions exist, but our experience has shown us that these seven are quite generalizable and provide an excellent starting point.

When designing an assessment center, resources and numbers of students to be assessed need to be seriously considered. Relevant factors to consider are the skills to be assessed and the significant logistics involved with some approaches. When we designed the Indiana assessment center, we needed to be able to simultaneously assess at least 40 students, and under special situations we knew that we needed to be able to assess 80 students simultaneously (in some cases, we have assessed 1,000 students in 3 days). Because of the large numbers of students, we designed the assessment center with the following guidelines:

1. All assessment activities would need to be self-contained. In other words, students would need to be able to work on activities without a facilitator being part of the activity.
2. The assessment could not last longer than 3 hours due to scheduling, space, and student fatigue considerations.
3. Costs needed to be contained. The cost structure needed to be affordable for students and/or the college without sacrificing quality exercises and assessment.
4. To reduce costs and increase accuracy, all rating would be done via videotape (versus live rating as is often done in ACs) so that rating could occur more efficiently (using fewer total raters) and more reliably (a permanent record would exist to be reviewed for accuracy).

Once the skills to be assessed have been identified, exercises need to be developed that provide students the opportunity to demonstrate the skills being assessed. In most ACs, participants engage in a number of activities

designed to elicit their skills, including leaderless group discussions, presentations, in-baskets, and role-playing. We have designed four specific exercises: two leaderless group discussions, an oral presentation and an in-basket exercise. One leaderless group discussion (LGD) requires students to decide on their top three candidates (out of a pool of seven) for a new CEO position by evaluating candidate resumes. The other LGD instructs participants to solve a customer service issue impacting the organization. The leaderless group discussions typically have five or six members. The oral presentation requires students to deliver a three-minute speech in front of a small audience of their colleagues (three or four other students) on an organizationally relevant topic. Finally, the in-basket exercise entails multiple memoranda and organizational information that require written responses. Although many ACs incorporate one-on-one activities that involve the assessee interacting with a role-player,³⁵ this type of activity has been deemed too labor intensive for the large-scale on which we were operate. More specifically, because of the number of students in Indiana University's Kelley School of Business, we calculate that we would need 26 role-players working for the better part of three straight days to have a well-run, one-on-one exercise. Faced with the problems of trying to keep consistency across this number of role-players (both between the role players and across individual role players as they fatigued), we have decided that a one-on-one activity is not viable.

In addition to the exercises described above, our exercises also include self-assessments. Students complete motivational (e.g., need for achievement, affiliation and power) and personality assessments (e.g., The Big Five), as well as self-ratings on the skill dimensions. These additional measures are distinct from the skills feedback, and they help students to put their skills feedback into a larger framework and learn about how their preferences impact their own and others' behavior.

To provide a richer assessment experience, we have chosen to integrate the four exercises into a compressed workday (the actual assessment takes 2 1/2 hours) for a simulated company. At least one week before the assessment, students receive the company's annual report (the company is referred to as Iliad, Inc. and the assessment center is referred to as "Iliad"). This annual report provides important company background (basic financials, letter from the CEO, etc.) and provides context for the students. Building on this initial context, when the students arrive at Iliad they are shown a direction video and then provided with their personalized in-basket. The in-basket is the exercise that integrates the other activities into the assessment experience. In others words, the tasks are integrated into students' schedules so that memos from the in-basket direct the students to their meetings and to their presentation. In-basket memos are to be answered when the students are not involved in the other activities. By doing this, the assessment center maintains high face validity and fidelity, because it has the feel of a "day at work."

Sample Assessment Center Rating Tools

Because the four exercises (2 leaderless group discussions, presentation, and in-basket) associated with Iliad are designed around a series of seven skill dimensions, it is important for validity purposes to have multiple opportunities during the assessment for the student to exhibit each skill area. For instance, providing useful feedback on a behavior (e.g., oral communication) that was only observed for a few minutes could provide very unreliable or unrepresentative results and provide subsequently wrong or biased feedback. As a result, all skills are assessed in multiple activities so that students have multiple opportunities to demonstrate the skills. More rating opportunities tend to provide more stable and accurate ratings of the skill. The table below provides the skill/exercise matrix on which Iliad operates.

Table 2
Iliad Skill/Exercise Matrix

Skill/Exercise	New CEO Meeting	Customer Service Meeting	3-Minute Presentation	In-Basket Memos
Decision-Making	X	X	X	X
Initiative	X	X	X	X
Leadership	X	X		
Planning	X	X	X	X
Organizing	X	X	X	X
Teamwork	X	X		
Oral Communication	X	X	X	
Note: X denotes that the skill is assessed in the respective exercise				

In order to facilitate objectivity in the rating process, we give great deference to the rich empirical literature on designing ACs (e.g., Lievens, 1998). A number of suggestions follow from that literature. First, we have created a very precise behavioral explanations or “rating dictionary” where each behavior is defined for each meeting. Further, we choose to use a behavioral checklist rather than a Likert-type rating scale (Reilly, Henry & Smither, 1990). That is, raters assess skills using a binary system noting whether the student exhibited the behavior or not. For instance, in the two leaderless group discussions (i.e., the new CEO meeting and the customer service meeting), teamwork behaviors are rated. While they are assessing the meetings, raters are looking for a series of specific behaviors that represent the dimension of teamwork. Some examples of these specific behaviors include:

- Seeks input from other group members

- Validates other group members
- Does not interrupt other group members
- Checks for common understanding among group members

To further elaborate on the teamwork behaviors listed above, the “rating dictionary” provides a further description of the behavior and provides prototypical examples.

Example-Iliad Rating Dictionary Excerpt:

Selected Teamwork Behaviors Rated in New CEO Meeting

Behavior: Seeks input from other group members.

Definition: Subject asks questions for clarification (e.g., “Can you provide a further example of that?”) or solicits ideas from others (e.g., “We haven’t heard your thoughts yet, what do you think about this candidate?”).

Behavior: Validates other group members.

Definition: Affirms others and/or their contribution (“I thought her idea was really good.” This is NOT simply nodding in agreement or saying “right” or “I agree”). Exemplary demonstration of this behavior is shown when the subject both affirms the contribution of another person and then “piggybacks” on their idea (e.g., “I’d like to take that one step further...”).

Behavior: Does not interrupt other group members.

Definition: Does not interrupt other group member inappropriately (e.g., talking over or “cutting off” another person who is making a concise point.) This behavior should still be checked if the ratee stops a “rambler” or apologizes for the interruption and provides a reason (e.g., “I am sorry to interrupt, but we need to make a decision in the next two minutes”).

Behavior: Checks for common understanding among group members.

Definition: Verbally confirms the positions and/or ideas expressed by group members. Common examples include: “So, it seems that we have decided upon..., does everyone agree?” or “In summary, I hear..., is this correct?” or “It sounds like everyone is on the same page, does everyone support this answer?”

These rating dictionaries, however, have to include all of the individual behaviors representing the overall behavioral dimension (in the example it was teamwork) for each exercise (in the example it was the new CEO meeting). The use of a detailed rating dictionary will increase the reliability of the ratings by substantially reducing the amount of judgment that is left to

the individual raters. This increased reliability is also important, because it makes comparing the ratings of two different raters relatively trouble free as well as making comparisons between schools possible.

Once all of the ratings are compiled, they are entered into a scoring program, where each observed behavior (e.g., seeks input from other group members) is provided a weight. Subject matter experts (50 practicing managers) have rated how important the behaviors are for successful managers. These ratings are used to determine the relative weight of the observed behaviors. The weighted scores of the observed behavior are then summed to provide a score by behavioral dimension (e.g., teamwork) and exercise (e.g., CEO meeting). These data are then aggregated across activities (e.g., since teamwork is measured in the two group meetings only, the teamwork score is the total points earned in these two meetings) and across behaviors within an exercise (e.g., a new CEO meeting score is derived by summing the points earned in each of the seven dimensions, since all seven dimensions are assessed in the new CEO meeting). This way, feedback is based upon both the student's skills across activities and their performance within a specific exercise.

Sample Student Feedback

Through considerable experience, we have found that students process their feedback best when it is presented by both skill (e.g., teamwork score, planning score, etc.) and exercise (score in new CEO meeting, presentation, etc.). We have also found that providing this information in a benchmarking format (i.e., by percentile) provides the student excellent information on how they performed relative to thousands of other people who completed the same assessment under the same conditions. Because the scores are being compared to a large database of other scores, we are able to present scores as percentiles. Some institutions like to provide their students the actual percentile scores, whereas other schools prefer to group bands of scores under descriptive labels (e.g., the bottom 25% = "needs improvement," middle 50% = "average," top 25% = "outstanding"). The framing of the feedback is largely based on the institution's assessment and development goals and varies by institution and professor. For instance, some schools like to "light a fire" under their students, providing motivation for performance improvement. These schools tend to prefer a raw percentile score shown relative to others nationally. Other schools tend to use more descriptive terms and give more general feedback to students. To provide a flavor of the numerical feedback provided to students, we have included an excerpt from the report each student receives. The entire report can run about 15 pages long and includes a developmental action planning process. In Appendix A, we have provided an example where both percentile and descriptive labels are used.

Some AC Challenges

In our experience with ACs, we have experienced a number of challenges surrounding issues of design and administration. First, it is difficult to fully express the enormous time commitment associated with designing an effective and sustainable AC. This is not a project where a faculty member can be given a course release and be expected to have a “well-oiled” AC at the end of a term. For the first three years, we made significant changes after almost every major group assessed, and WE had the benefit of running the AC at multiple institutions. This allowed for significant improvements to occur much more quickly. Second, the design of good exercises that truly elicit the desired assessed behaviors is difficult; expect many iterations and “versions.” Third, developing checklists of truly observable behaviors is much more difficult than it may appear at first. For instance, in the early development stages of Iliad, we were convinced that active listening was an important skill that needed to be included in the rating. However, after having a large number of people watch hours of videotape, we came to the conclusion that active listening could not be rated to our satisfaction. In all, the design aspect of a good assessment center needs to be considered in months and years, not days and weeks.

Beyond the design challenges, the administrative challenges can be surprisingly complicated even with a supportive administration and faculty. The general challenges from an administrative end relate to rating, physical space and time, funding, and curriculum integration. Regardless of whether the assessment center is rated live or via videotape, trained raters are needed. The selection, training, rating system design, rater compensation, and data management issues all have to be well thought out in advance. In the end, the information generated from any assessment center is only as good as the raters and the rating system they employ.

The requirements of both physical space and student time are interrelated issues that often catch programs off guard. Due to the use of multiple exercises, the number of separate rooms required can grow quite large. For instance, we generally utilize about seven rooms when forty people are being evaluated. In most institutions, this amount of space is a scarce resource during the regular term schedule. In addition, most ACs require more student time than a regular class period allows. As a result of this problem, we kept Iliad under three hours so that it could take the place of one week of classes. Another solution to space and time concerns is to assess students on weekends, so that space constraints are relieved and student schedules are not as restricted. Obviously, however, coming in for three hours on a Saturday or Sunday morning will not be universally well received by students and even participating faculty.

The third administrative issue is how to fund an ongoing AC. Our experience with different institutions shows there are multiple ways to find fund the AC effort; however, the funding should be commensurate with the

goals. That is, if the purpose of the AC follows the program-focused assessment model, it makes most sense for administration to provide funding. In a course-focused assessment model, institutions usually choose to have the students cover the cost of the AC through course fees or course materials such as a textbook ancillary. Each of these is a viable option, but a system does need to be put in place that can handle a recurring expense stream. Because of the recurring nature of the expense, it is our experience that funding through one-time grants, etc. is not a viable long-term approach.

The final administrative challenge that we will mention here is that follow-up to the AC – what assessment experts refer to as “closing the loop”—is critical. At a program level, the information from the AC should flow back into the decision-making process and be used to modify the curriculum (e.g., students are not demonstrating teamwork skills, so we need to focus more on these skills). At the course level, the identification of weaknesses in students raises the expectation that the institution will be doing something (i.e., providing a class or some other developmental activity) to help students develop their skills. Many business schools do not have such developmental experiences in place at present.

360-Degree Assessment Example

In contrast to the AC example provided above, it is much easier to modify 360-degree assessments for specific instances. The “start-up” costs of modifying a survey (associated with the 360 assessment) are substantially less than those associated with modifying assessment center activities. On the other hand, 360s can be difficult to achieve due the need for a large (e.g., 8-20 are desirable) group of raters. Thus, 360s are most viable when a large portion of the assessees are currently employed (e.g., part-time MBAs or non-traditional undergraduates), recently employed (e.g., full-time MBAs), or are engaged in other settings where their skills are displayed in the presence of other people (e.g., substantial group interaction, sports teams, extracurricular activities, etc.). Moreover, we have generally used 360s to assess the types of skills that may be difficult to evaluate in an AC, such as those that are more complex and require longer observation periods. As a result, we have used 360-degree assessments to examine skill dimensions such as: develops others, motivates others, networking behavior, administrative skills and persuasiveness.

To provide a detailed example of a 360-degree assessment survey, we include a sample instrument and explain the process. To facilitate a cost effective technique for gathering and processing 360-degree assessments for a large number of students, we have developed a Web-based system through which the data can be collected and feedback provided. The first step in conducting any assessment (and the 360-degree assessment is no different) is to determine what skills are going to be assessed. Based on the goals of the program with which we have been working, they have identified

the following seven areas. As a result, the skills to be assessed are: Administrative Skills, Communication Skills, Interpersonal Skills, Leadership & Coaching Skills, Political Skills, Motivational Skills, and Service Skills.

Once the skill dimensions were identified, specific behavioral survey items needed to be developed which tapped these underlying skill dimensions. After working with the instructors to better understand their specific operationalizations of the dimensions, we constructed a 42-item survey designed to measure the seven skill areas. This instrument is rated on a 5-point Likert scale asking the rater to assess level of agreement with the statement. In addition, raters provide written comments about the student's strengths and weaknesses. The survey requires about 20-30 minutes to complete. Sample items from this survey are included in the table below:

Because we use an online system, the first step in the process is getting the e-mail addresses of all of the students to be assessed. The

Table 3
Sample 360 Items

Administrative Skills
<ul style="list-style-type: none"> • Delegates responsibilities appropriately • Manages meetings effectively
Communication Skills
<ul style="list-style-type: none"> • Speaks clearly in front of groups • Conveys information clearly in written documents
Interpersonal Skills
<ul style="list-style-type: none"> • Works with others to effectively resolve conflicts • Develops cooperative working relationships
Leadership & Coaching Skills
<ul style="list-style-type: none"> • Leads by example • Provides specific constructive feedback in a timely manner
Political Skills
<ul style="list-style-type: none"> • Understands the agendas and perspectives of others • Recognizes key stakeholders related to important decisions
Motivational Skills
<ul style="list-style-type: none"> • Persists in the face of obstacles • Establishes challenging goals
Service Skills
<ul style="list-style-type: none"> • Anticipates customers' needs • Shows a concern for customer satisfaction

students being assessed then receive an e-mail asking them to provide the e-mail addresses of people who should be contacted as raters (e.g., superiors, co-workers, subordinates, customers, etc.). Once the rater list is entered, each rater receives an e-mail including a link that explains the purpose of the assessment and also gives the rater an opportunity to provide their assessment of the student being assessed. In addition, the student being assessed receives an e-mail with a link allowing him/her to complete their self-assessment to “round out” the 360 process.

A critical component of the process involves explaining to raters the purpose of the 360. Most important is to ensure the confidentiality and anonymity of the raters. Although it is beyond the scope of this chapter, it should be noted that 360s can be quite harmful if not handled ethically and professionally (see Waldman, Atwater, & Antonioni, 1998; DeNisi & Kluger, 2000). Since the number of raters responding impacts the quality of the feedback, it is imperative that the raters understand the voluntary nature of the process, why their voice is critical towards student development, and how the data are used. The process is highly time-sensitive, so raters often need a few reminders to ensure a turn-around time.

Once the surveying portion of the 360-process has been closed, students are able to access their online feedback reports. We have customized these feedback reports based on a number of different possibilities, but generally follow a format that moves from broad to specific feedback. As a result, we start with the feedback provided at the level of the skills dimensions and compare the self-rated scores to the scores provided by all of the other raters. Then, we “break out” the feedback by rater category (e.g., superiors, peers, subordinates, etc.). In subsequent report sections, we provide the feedback by item (in the example, all 42 behaviors) in the same manner (i.e., comparison of self vs. others and then by rater category). Lastly, verbatim comments are provided from all of the raters. After all of the feedback is presented, a developmental action planning guide is also included to help the student interpret the data and to provide a structure for making future improvements.

Although the entire report is relatively long (about 12 pages), we have excerpted a feedback report and have provided an example in Appendix B. In addition to the information provided in Appendix B, a full feedback report also includes an analysis by item and a significant amount of information to guide the assessee through the report.

Some 360 Challenges

Much like ACs, 360-degree assessments can be considered to have both design and administrative challenges, although the relative difficulty of the challenges faced differ significantly. From a design perspective, the actual 360 instrument is not particularly difficult to design once the skills to be assessed have been identified. A few faculty members with particular expertise in survey design and knowledge of management skills can typically develop

a competent 360. In this way, 360s offer much less of a design burden than do ACs. On the other hand, the design of the mechanism that allows for the surveys to be distributed, collected, and tabulated can be extremely labor intensive. We generally perform 360s online for the obvious benefits seen in reduced administrative burdens. This process can be managed on paper, but the data entry, computations, and summarization can be very labor intensive (especially if the group of students is relatively large). Next is the availability of useful 360 raters. Normally, we conduct 360-degree assessments with nontraditional students who have full-time employment. Conducting a 360-degree assessment for an individual who does not currently work, or who has recently held a job, can be a significant problem because of the lack of appropriate raters (i.e., people who can provide informed judgments regarding the individual's behavior). In some cases this problem can be alleviated if the curriculum includes significant, intensive, teamwork where students have a great deal of interaction with others who can provide ratings. If, however, the student does not have current or recent work experience and does not interact with other students on a regular basis, 360-degree assessments are not appropriate.

From an administrative viewpoint, 360-degree assessments offer some of the same challenges as do ACs. More specifically, both funding and curriculum integration are issues that must be addressed. Most universities choose 360s for use in a course or student-focused model. Thus, funding is primarily the responsibility of the student. Like the AC, follow-up from 360s is critical if students are to truly develop the skills assessed. Ideally, the feedback will be provided in an individual feedback session by a trained development coach. The coach can assist the student in processing the feedback and creating an action plan. The likelihood of this occurring is negatively correlated with class size. That is, it may be impossible to meet individually with students from a large class. There are several potential places to look for coaches—professors, advisors, career center staff, executives in residence, etc.

Concluding Thoughts

We do not intend to overstate the value of assessment centers and 360-degree feedback in their ability to assess and develop interpersonal skills. In fact, some scholars are highly critical of both ACs (e.g., Sackett & Dreher, 1982) and 360s (e.g., Waldman, *et al.*, 1998). However, in examining alternatives, it is difficult to find other methods that are able to more reliably and systematically measure behavioral skills and have higher face validity. ACs and 360s offer both an effective *and* efficient means of systematically assessing interpersonal skills on the way towards student skill development. Although the administrative obstacles associated with these assessment procedures may seem insurmountable, with a long-term commitment, they can be overcome. The result of such commitment is an effective and sustainable approach to assessing and developing managerial skills.

Appendix A
Iliad Assessment Center Results for Joe Sample

Student ID # 06122

Iliad ID# S35

These results are being provided to you for your development. These results should always be considered in a larger context. In this case, look at the results of this assessment, and consider other feedback you have received in the past. Look for trends in the information, as these will provide you with the most useful and true information.

Detailed Explanation of Your Assessment Center Performance by Skill Area

Below are details about your performance for each skill area. The table summarizes your scores for each skill area. Under the table are examples of the types of behaviors that were assessed to arrive at your score. The percentile ranking is the percentage of others that you outperformed on this skill (i.e., higher numbers are better).

Assessed Skill	Percentile	Description
Decision-Making	87	Excellent
Initiative	71	Very Good
Leadership	55	Good
Planning	2	Needs Improvement
Organizing	25	Needs Improvement
Teamwork	14	Needs Improvement
Oral Communication	32	Good

In the next portion of the feedback, their actual performance in the assessment center is compared to their skill self-assessments that were collected immediately before the assessment began. The feedback from the combination of their skill self-assessment and their assessment center performance is provided in the following manner:

Iliad Assessment Center Results for Joe Sample (Part 2)

Student ID # 06122

Iliad ID# S35

Summary of Your Assessment Center Skill Areas

Summary Explanation

At your assessment, you provided a self -assessment of your skills in the following areas. Those scores were compiled and any score of over 50 was considered a self-rated strength and any score 50 or below was considered a self-rated weakness. Then, your actual performance was compared to the self-ratings. The table below includes the information that is a summary of your performance versus the self-ratings on the following skills.

- Decision-Making, Initiative, Leadership, Planning, Organizing, Teamwork, Oral Communication

Unacknowledged Strengths are skill areas in which the assessors rated you above average (compared to other participants) in this area, but you rated yourself lower than other participants. These are skill areas you may not be aware you possess.

Confirmed Strengths are skill areas in which the assessors rated you above average and you also rated yourself above average. These represent skill areas on which you can capitalize.

Confirmed Weaknesses are skill areas in which the assessors rated you below average and you also rated yourself below average. These are skills you already recognize have room for improvement.

Unacknowledged Weaknesses are skill areas in which the assessors rated you below average and you rated yourself above average. These represent skill areas that you may not recognize need improvement and therefore they are a good place to begin individual development.

Skill Assessment Grid

Skill Areas	Confirmed	Unacknowledged
Strength	Decision-Making, Initiative	Leadership
Weakness	Planning, Organizing	Teamwork, Oral communication

The third portion of the feedback provides some information relating to the student's performance in each of the activities. While most assessment centers focus solely upon the skill-related feedback, we found that many students wanted to know, "How did I do on the speech?" or "How was my

CEO meeting?’ To accommodate these requests, we decided that adding performance feedback based upon the activities was consistent with the spirit of developmental feedback and may be more meaningful to certain students. An example of this feedback by exercise is presented below:

Iliad Assessment Center Results for Joe Sample (Part 3)

Student ID # 06141

Iliad ID# S35

Your Assessment Center Performance Score by Exercise

Recall that you completed four exercises during the assessment center:

- CEO Selection Meeting
- Customer Service Meeting
- Oral Presentation
- In-basket Exercise

Below are your scores for each assessment center exercise. When reading the table below, please remember that the scores from one exercise (e.g., the CEO selection meeting) are independent of the other activities (e.g., the in-basket). Because of this, a “higher” score on your speech than in your Customer Service meeting does not mean a high performance level. The performance level is based upon the percent of your classmates that you did better than. The same is true of your overall score - this is ranked against all of the other total scores to come up with your overall performance level.

Exercise Name	Percentile	Description
CEO Selection Meeting	42	Average
Customer Service Meeting	38	Good
Oral Presentation	70	Very Good
In-Basket	58	Good
Total	56	Good

**Appendix B
Excerpt to Illustrate a 360 Feedback Report for Jen Sample**

Self and All Observers Specific Behaviors Table

Specific Behaviors	Self-Rated Score	All Others-Rated Score
Administrative Skills	4.86	3.99
Communication Skills	4.40	3.88
Interpersonal Skills	3.57	3.71
Leadership & Coaching Skills	3.71	3.92
Political Skills	2.50	3.81
Motivational Skills	4.43	4.23
Service Skills	3.80	3.94

Self and All Observers Specific Behaviors Table

Specific Behaviors	Self	Boss	Reports	Peers	Others
Administrative Skills	4.86	4.33	3.70	4.11	3.79
Communication Skills	4.40	4.10	3.80	3.92	3.70
Interpersonal Skills	3.57	3.92	3.56	3.69	3.79
Leadership & Coaching Skills	3.71	4.12	4.00	3.80	3.93
Political Skills	2.50	4.00	3.50	3.88	3.88
Motivational Skills	4.43	4.64	3.90	4.26	4.21
Service Skills	3.80	4.20	3.93	3.81	4.00
Note: A full report includes detailed analyses by item and substantial information designed to help the assessee interpret the results.					

Endnotes

- 32 The Assessment Center at Valparaiso is described in detail in "Fostering the Professional Development of Every Business Student: The Valparaiso University College of Business Administration Assessment Center," in Vol. 1, No. 2.
- 33 Program assessment models can be either internally developed, or contracted out. The Valparaiso example in volume 2 of this series is an example of an internally developed center. Quite often, universities need external help in this process as the demands are often quite technical and the learning curve to constructing these processes is quite steep. For information on the assessment center that we have helped universities institute over the past ten years, please contact the authors.
- 34 Editor's note: The AACSB does not require value-added assessment, and does not specify when assessment must occur. Thus, the AC would not have to be administered as a pre-posttest, or at the end of the curriculum, in order for it to be deemed an acceptable assessment.
- 35 Editor's note: Valparaiso's assessment center incorporates role play—and, yes, it is a labor intensive process.

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