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The Relationship between Skill and Importance Ratings in Multi-source Feedback

Guangrong Dai
Kenneth P. De Meuse
George S. Hallenbeck
Paul D. Stiles

Lominger International—A Korn/Ferry Company

This paper has been presented at the
2007 Annual Meeting of the Academy of Management in Philadelphia

Abstract

Most of the research on multi-source feedback focused on skill rating. This study investigated both skill rating and importance rating. Two methods were used to examine interrater agreement: between-learners and within-learner interrater correlation. Between-learners correlation exams the extent to which different rater sources rank the learners (i.e., rates) on a specific leadership competency in a similar way. Within-learner interrater correlation indicates how much the rank orders of a host of leadership competencies from different rater sources are similar to each other. It was found that interrater correlations on both skill rating and importance rating are low. But within-learner interrater correlations were higher than between-learners interrater correlations. Skill rating was correlated to importance rating. Follow-up analysis indicated that within-learner skill-importance correlation is related to the overall skill level of the learners, suggesting that learners who fit with their jobs as perceived by a particular rater constituency group are generally rated high on skill rating scale by the same rater constituency group.

The primary objective of most multi-source feedback programs is to facilitate an individual's development (Garavan, Morley, & Flynn, 1997). Many leadership competency 360-degree feedback instruments use skill ratings as well as importance ratings in this process (e.g., Bailey & Austin, 2006; Lombardo & Eichinger, 2003). When creating a developmental plan, feedback recipients select a small number of leadership competencies to develop. Typically, only those *lower ranked* competencies that are *most important* in the performance of one's job tend to be selected.

A review of the scholarly literature indicates that the majority of the research on multi-source feedback has focused on skill ratings. Importance ratings, in contrast, largely have been ignored. This is not without reasons. Developmental multi-source feedback was in the first place designed to help develop managers' performance skills. Feedback interview mostly is centered on the recipient's skills, such as what are the recipient's strengths and weaknesses, and how different rater constituency groups agree with each other on their skill ratings (e.g., Atwater, Ostroff, Yammarino, & Fleenor, 1998; Yammarino & Atwater, 1997). Since importance rating plays a critical role when feedback recipients select what leadership competencies to work on, it would seem logical that researchers should pay attention to them. Consequently, we sought in this study to fill this void by addressing some issues related to importance ratings in the multisource feedback process.

First, we will examine the interrater agreement of importance ratings. The research on interrater agreement on skill ratings has been extensive (e.g., Atwater, Waldman, Ostroff, Robie, & Johnson, 2005; Harris & Schaubroeck, 1988; Ostroff, Atwater, & Feinberg, 2004). This research has indicated that correlations between

different rater constituency groups tend to be low to moderate at best (Conway & Huffcutt, 1997; Landy & Farr, 1980). This lack of convergence between different raters is neither surprising nor problematic (Landy & Farr, 1980). Traditionally such discrepancies between different rater groups frequently were viewed in terms of error variance that should be reduced or eliminated. The prevailing view, however, has recently shifted to perceiving these discrepancies as providing useful and meaningful information that needs to be further explored (Tornow, 1993). Consistent with this literature, we expect relatively low interrater agreement on skill ratings in this study. On the other hand, it should be recognized that skill ratings are ratings of people. Raters may have different opportunities to observe an individual's performance, or may focus on different aspects of the work performance (Landy & Farr, 1980). In contrast, importance ratings are the perceptions of the overall competencies required for a job. As such, raters may have much more similar perceptions on what competencies are required for successful performance on a job. For example, Smith & Hakel (1979) found that the perceptions of what tasks are performed in jobs obtained from professional job analysts were highly correlated ($r = 0.91$) with those obtained from college students who were given no information about the job other than job titles. Surrence, Aamodt, and Johnson (1990) also found that when using the Position Analysis Questionnaire as the job analysis instrument, the amount of information about the job received by the job analysts did not affect the job analysis outcomes. It seems reasonable to expect that raters from different positions will be more likely to agree on *importance* ratings (perceptions of competencies needed for performance) than *skill* ratings (perceptions of how well an individual is performing).

Second, we will examine the relationship between skill and importance ratings. We believe that skill ratings will be correlated with importance ratings, because individuals should be more skilful on competencies that are important for the job. Two reasons lead to such a positive relationship. First, people are usually selected based upon the competencies considered important for a job. Person-job fit is the traditional foundation for employee selection (Werbel & Gilliland, 1999). The primary concern in employee selection has been with locating those applicants who have the skills and abilities necessary to do the job. Secondly, people will be able to further develop these important competencies, due to the fact that there will be more opportunities to practice these competencies while performing the job. Experience is the best teacher (Lombardo & Eichinger, 2004). Successful managers likely develop on the jobs (McCall, Lombardo, & Morrison, 1988). In addition, the organization likely will have fewer support systems in place to help people develop *unimportant* competencies (Lombardo & Eichinger, 1995). Thus, we predict that the lower the importance, the more difficult the competency will be to develop.

Finally, we will investigate the moderating effects of rater sources on the relationship between skill rating and importance rating. Although we expect higher interrater agreement on importance ratings than skill ratings, we recognize there may be rater position differences. It seems likely that a “boss” is in a better position to evaluate competency importance organizationally and strategically than are the job incumbents. After all, the boss created the job description, coordinates duties and responsibilities among the staff, and supervises the overall mission of the department/function. Research in job analysis indicates that bosses’ rating is more reliable than job incumbents’ rating

(Dierdorff & Wilson, 2003). The same findings have been replicated in the multi-source performance rating literature. For example, Conway and Huffcutt (1997) found that boss ratings had the highest reliability, followed by peers' ratings. Direct reports showed the lowest reliability. Probably "it is part of the supervisor's job to pay attention to and evaluate subordinates' performance" (Conway & Huffcutt, 1997. p.347). The correlation between skill rating and importance rating is directly influenced by the reliabilities of both skill and importance rating. We therefore predict a relatively higher correlation between skill and importance ratings obtained from the boss than other rater constituency groups such as self and peers. The correlation for direct reports will be the lowest.

Method

Sample

An archival database of responses to a commercial 360-degree feedback instrument was used for this study. To be included in the study, all ratees (i.e., "learners") had to provide self-ratings as well as be rated by their boss and multiple peers and direct reports. The original sample consisted of about 1,150 employed adults from seven companies. Cases with missing values on more than 5% of the rated competencies by any of the four rater constituency groups were deleted. Consequently the final data set consisted of 740 learners. The overall missing rate in the final data is 0.5%. Given this small number of missing values, we coded all missing data with the mean item scores (Downey & King, 1998; Roth, 1994). Due to confidentiality concerns, no information on age, ethnicity, or gender was provided for the participants.

The multi-source leadership competency feedback instrument

The multi-source feedback instrument used in this study consists of 67 items designed to assess 67 leadership competencies. The theoretical foundation and research on the development of the instrument are summarized in Lombardo and Eichinger (2003, 2004). Each of the manager's leadership competencies is rated on a 5-point scale to indicate how skilled the individual is on a given competency. Responses can range from "a towering strength" (5), "talented" (4), "skilled/ok" (3), "a weakness" (2), to "a serious issue" (1). According to Lombardo and Eichinger (2003), test-retest reliability was .75 for self-rating and .82 for others' rating (i.e., peers, boss, and direct reports). In addition, each of the managerial leadership competencies was rated on a 5-point scale to assess how important it was for the learner's job. The scale ranged from "mission critical" (5), "very important" (4), "nice to have" (3), "less important" (2), to "least important" (1).

Data Analysis

To investigate the interrater agreement, ratings from the same rate constituency group were first averaged. To justify this aggregation across raters within the same rater group, there must be sufficient intra-rater reliability. As reported by Lombardo and Eichinger (2003), the mean intra-class correlations were .75 and .66 for the direct reports and peers across the 67 competencies respectively, adequate to justify aggregation (Van Velsor & Leslie, 1991).

In the current study, we calculated the interrater correlations in two ways: (a) between-learners interrater correlation and (b) within-learner interrater correlation. Learners were rated on 67 leadership competencies by four rater constituency groups: self, boss, peers, and direct reports. Between-learners interrater correlation indicates how much the different rater groups are in agreement in ranking the learners on a specific

leadership competency. High between-learners interrater correlation indicates that the learners are ranked by different rater groups in a similar way. Almost all the studies in the literature investigating the interrater agreement have used the between-learners interrater correlations. In practice, leadership competency multi-source feedback programs are primarily used for developmental purposes. As a result of the multi-source feedback, feedback recipients usually will identify their developmental needs and try to improve their leadership competencies they are not good at. Therefore, the focus of developmental multi-source feedback is not on how a learner is compared to other learners, but on what are the relative strengths and weaknesses within each of the learners. The within-learner interrater correlation is more relevant than between-learners interrater correlation in the context of developmental multi-source feedback.

Consequently, the current study also looked at the within-learner interrater correlation.

High within-learner interrater correlation indicates that different rater groups ranked the competencies similarly for the same learners.

Results

Table 1 shows the between-learners interrater correlations on skill rating for each of the 67 competencies. Overall, the between-learners interrater correlations are low, ranging from .19 to .30. The low end of the 90% confidence interval (CI) for each pair of rater constituency groups was above 0, suggesting overall low but solid convergence between rater sources across all the 67 competencies. The correlations between self and other rater groups are lower than the correlations among other rater groups.

Table 2 shows the between-learners interrater correlations on importance rating for each of the 67 competencies. The between-learners interrater correlations on

importance ratings were even lower than the between-learners interrater correlations on skill ratings, ranging from .10 to .17. Our prediction was not supported. The low end of the 90% CI for each pair of rater constituency group was again above 0, suggesting overall low but solid convergent between rater sources on all the 67 competencies.

Table 3 presents the between-learners skill-importance correlations for each of the 67 competencies. The mean correlations are moderate, ranging from .34 to .41. The low end of the 90% CI for each rater constituency group was above .22. Consequently, our prediction regarding the relationship between skill and importance rating generally is supported. Skill rating is correlated with importance rating. However, contrary to our prediction, the mean correlations were highest for direct reports (.41). Self and Boss have the lowest correlations (.34 and .35 respectively).

Tables 4 and 5 present the within-learner interrater correlations on skill rating and importance rating. The within-learner correlations on skill rating are around .30. The low end 90% confidence interval are all above 0, indicating that the skill rating from different rater constituency groups are correlated with each other, although at a moderate to small effect size. The within-learner correlations on importance rating range from .21 to .31. The low end 90% confidence interval are mostly above 0, suggesting again that the importance rating from different rater constituency groups are correlated with each other at a moderate to small effect size. Two observations are noteworthy. First, the mean within-learner interrater correlations are consistently higher than the mean between-learner interrater correlations. Second, contrary to our expectation, the interrater correlations on importance rating are not higher than the interrater correlations on skill ratings.

Table 6 depicts the within-learner skill-importance correlations. The mean correlations were moderate, around .30. Again, our prediction regarding the moderating effects of rater group was not supported. The mean correlations for different rater groups are about the same in magnitude. A closer look at the distributions of the correlations reveals that there are large variations. The skill-importance correlation is as high as more than .70 for some learners. However, the low end of the 90% confidence interval for all the rater constituency groups are below 0, suggesting that the within-learner correlation between skill and importance ratings is moderated by other factors.

Follow-up Analysis

As indicated above, there were large variations on the within-learner skill-importance correlations. For some learners, skill rating was highly and positively correlated to importance rating. But for others, skill rating was not or negatively correlated to importance rating. It appears that some factors related to learners moderated the skill-importance correlation. High and positive skill-importance correlation implies good person-job fit. In contrast, low and negative skill-importance correlation implies poor person-job fit. A recent meta-analysis by Kristof-Brown, Zimmerman, and Johnson (2005) found that person-job fit was significantly related to tenure. One explanation was that employees develop their skills on the job. Overtime, they will be more skilled on job relevant qualifications. If this is true, then we will expect a positive correlation between overall leadership competency skill rating and the skill-importance relationship. To test this, we computed the average skill rating on 67 competencies for each of the participants. We then correlated the average skill rating with the within-learner skill-importance correlation. The results are summarized in Table 7. The correlation between

average skill rating and skill-importance correlation was statistically significant for each of the rater constituency groups. The highest correlation approaches .60. We also computed the “all others” (excluding self) average skill rating and correlated it with the skill-importance correlation for “all others”. Again, the skill-importance correlation is related to the overall average skill rating ($r=.52, p<.001$). This suggests that participants who fit with their jobs as perceived by a particular rater constituency group are generally rated high on skill rating scale by the same rater constituency group. Following the procedure recommended by Cohen and Cohen (1983), the average correlations between the skill and importance rating were calculated for high, average, and low three levels of overall skill rating (+1, 0, and -1 standard deviations from the mean). Table 8 presents the average skill-importance correlation at different levels of overall skill rating. One-way ANOVA indicated that the skill-importance correlations are statistically different across the skill levels for all the rater constituency groups. The skill-importance correlation was highest for high skill rating group, but lowest for low skill rating group.

Discussion

Little research has been conducted to investigate *importance* rating in multi-source feedback. This study explored the interrater agreement on importance rating and how importance rating is related to skill rating. As has been found in the research literature examining the interrater agreement on skill rating, interrater agreement on importance rating was moderate to low. The 90% CIs mostly excluded 0, suggesting that there was solid convergence among different rater constituency groups. We also found that importance rating was correlated with skill rating. However, this correlation was not moderated by rater sources. A few findings were noteworthy.

First, interrater agreement on importance rating was no higher than interrater agreement on skill rating. It appears that raters are not very much in agreement in judging what is important for a job. There are several possibilities for the low interrater agreement on the importance rating. One possible reason is that a single item was used to rate each of the 67 competencies. The low interrater agreement could be due to the low reliability associated with rating the importance of each competency. In some way, rating the importance of the leadership competencies in multi-source feedback is similar to specify the prerequisite worker-traits needed for successful job performance in job analysis. Research in job analysis indicates that abstract inferences are involved when making worker-traits judgments and these judgments are more susceptible to rating inaccuracy (Dierdorff & Wilson, 2003; Morgeson & Campion, 1997). Furthermore, rater observed different aspects of the learners' job performance (Borman, 1997) and may judge the importance based upon their observation of the learners' performance.

Lombardo and Eichinger (cited in Eichinger, Lombardo, & Ulrich, 2004) identified top 22 leadership competencies most often related to current or long-term performance and then looked at what people said about how important the competencies were. About 60% of these competencies were rated to be important by the participants. The authors therefore concluded that asking people to judge what's important in their own jobs or in the jobs of others is about a "half-right technique". They suggested that doing actual research to find what differentiate best performers from others would do a better job to identify important leadership competencies.

If people are not good at judging the importance, then what is the usefulness of have the importance rating in multi-source feedback? We believe that importance rating

still have practical values. First of all, if the low interrater agreement on importance rating is simply the result of random error, aggregation of the ratings from multiple rater sources will enhance the reliability of the importance rating. On the other hand, if the low interrater agreement is due to the unique perspective different rater sources have, the multi-source feedback is an excellent chance for the different constituency groups to communicate their observations and expectations. This composite information has the potential to help diagnosis the group dynamics and facilitate team building.

A second intriguing finding was that within-learner interrater agreement was higher than between-learners interrater agreement. As discussed in the introduction section, the primary purpose of the developmental multi-source feedback process is to identify developmental needs for the learners. The relative strength and weakness within the learners are more relevant than the relative competitiveness between learners in the context of developmental multi-source feedback. The findings of the current study suggest that the traditional method of examining interrater agreement underestimated the degree of convergence between rater sources. Different rater sources may have different standards against which to rate the learners. Nevertheless, there are substantial convergences between the rater sources regarding what are the relative strengths or weakness for the same learners.

Finally, the follow-up analysis indicated that the within-learner skill-importance correlation is related to the overall skill level. In other words, those who fit their jobs are generally rated high on the skill rating scale. One interpretation is that learners developed the important leadership competencies on the job and over time the level of person-job fit increases. An alternative interpretation is that the learners were selected and placed on

their jobs based upon the assessment of person-job fit. Those who fit their jobs are generally performing well. This correlation does not tell us which is the cause, and which is the outcome. Both interpretations may be true. People are selected and placed on the assessment of person-job fit. Once placed, they will further develop their leadership skills. Lombardo & Eichinger (2004) distinguished two types of leadership competencies: (a) price-of-admission skills and (b) competitive-edge competencies. Price-of-admission skills are generally correlated with performance and people are usually good at them. Organizations should select for these competencies. Competitive-edge competencies are those that predict job performance but people are not so good at. These competencies are mostly developed on the job.

In summary, the present study represents an initial attempt to empirically investigate some issues related to importance rating in multi-source feedback. The findings of this study suggest that, like we found with skill rating, different rater sources are not much in agreement in importance rating. A significant strength of this study is that we used a multi-source feedback instrument assessing 67 competencies. Consequently, we were able to look at the within-learner interrater agreement and examine how the skill rating is related to the importance rating. Importance rating is a vital part of many developmental multi-source feedback programs. Many questions researchers asked about skill rating also are relevant to importance rating. Researchers should continue this line of research on importance rating as they did on skill rating. In addition, there are unique research questions for importance rating. For example, importance rating appears to be similar to worker-traits specification in job analysis. Will the theories or models generated in the field of job analysis be generalizable to the field

of importance rating in multi-source feedback? Skill rating has its root in performance rating. Performance rating and job analysis are distinct research areas in the scholarly literature. Multi-source feedback provides researchers unique opportunities to integrate these two areas of research.

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Table 1.

Between-Learners interrater correlations on skill rating

Item	Self-Boss	Self-Peers	Self-DRs	Boss-Peers	Boss-DRs	Peers-DRs
1	.24	.31	.30	.33	.33	.34
2	.10	.21	.15	.24	.19	.16
3	.29	.36	.32	.44	.35	.42
4	.20	.26	.16	.24	.24	.19
5	.19	.25	.18	.33	.23	.24
6	.28	.33	.25	.35	.33	.34
7	.27	.28	.29	.35	.31	.31
8	.25	.21	.18	.29	.25	.35
9	.20	.26	.26	.33	.29	.31
10	.25	.33	.36	.36	.36	.39
11	.26	.30	.31	.36	.28	.31
12	.14	.15	.08	.26	.21	.23
13	.19	.24	.29	.20	.23	.24
14	.31	.33	.29	.33	.27	.28
15	.23	.25	.20	.31	.29	.30
16	.19	.13	.14	.24	.24	.27
17	.06	.10	.12	.27	.24	.29
18	.22	.21	.18	.24	.19	.29
19	.23	.17	.26	.21	.31	.26
20	.17	.17	.18	.24	.20	.31
21	.21	.20	.16	.27	.22	.24
22	.12	.12	.16	.23	.17	.27
23	.11	.09	.17	.25	.20	.23
24	.14	.24	.20	.27	.28	.29
25	.15	.20	.21	.25	.23	.23
26	.23	.27	.28	.33	.31	.40
27	.18	.13	.21	.21	.29	.29
28	.15	.23	.13	.23	.14	.21
29	.17	.10	.16	.25	.22	.27
30	.19	.23	.26	.39	.33	.36
31	.18	.29	.23	.40	.30	.41
32	.15	.14	.12	.21	.20	.21
33	.16	.23	.20	.34	.25	.30
34	.23	.25	.27	.24	.30	.21
35	.13	.12	.14	.19	.19	.23
36	.20	.23	.25	.31	.33	.38
37	.22	.26	.17	.30	.22	.27
38	.16	.21	.14	.25	.27	.25
39	.26	.24	.19	.26	.27	.21
40	.09	.14	.15	.25	.17	.21

Item	Self-Boss	Self-Peers	Self-DRs	Boss-Peers	Boss-DRs	Peers-DRs
41	.28	.35	.30	.37	.30	.39
42	.19	.24	.18	.35	.25	.30
43	.17	.17	.21	.23	.28	.24
44	.13	.18	.16	.21	.21	.27
45	.00	.15	.08	.22	.16	.18
46	.12	.16	.16	.26	.26	.23
47	.22	.19	.16	.27	.21	.28
48	.19	.26	.17	.32	.23	.30
49	.31	.27	.28	.42	.34	.36
50	.15	.13	.09	.13	.16	.22
51	.10	.12	.15	.24	.20	.24
52	.24	.22	.18	.24	.19	.18
53	.39	.35	.32	.37	.32	.35
54	.15	.15	.12	.27	.23	.25
55	.03	.16	.11	.20	.16	.21
56	.11	.10	.13	.18	.21	.20
57	.19	.18	.17	.27	.23	.29
58	.17	.23	.19	.26	.26	.26
59	.09	.16	.18	.13	.11	.24
60	.19	.20	.24	.32	.36	.30
61	.34	.31	.32	.42	.29	.28
62	.24	.22	.18	.28	.27	.32
63	.16	.20	.20	.27	.19	.18
64	.12	.16	.13	.25	.16	.16
65	.22	.25	.22	.35	.30	.23
66	.27	.34	.36	.31	.32	.38
67	.31	.29	.34	.31	.27	.32
<i>Mean</i>	.19	.22	.20	.28	.25	.28
<i>Std.</i>	.07	.07	.07	.06	.06	.06
Low end of 90% CI	.07	.10	.09	.17	.15	.17

Table 2.

Between-learners interrater correlations on importance rating

Item	Self-Boss	Self-Peers	Self-DRs	Boss-Peers	Boss-DRs	Peers-DRs
1	.04	.12	.09	.11	.04	.13
2	.06	.09	.15	.06	.08	.15
3	.11	.14	.12	.18	.20	.22
4	.06	.12	.07	.16	.10	.14
5	.15	.22	.22	.22	.18	.28
6	.12	.21	.17	.15	.16	.17
7	.15	.10	.13	.21	.10	.25
8	.15	.17	.21	.15	.15	.16
9	.08	.12	.08	.08	.10	.13
10	.13	.13	.16	.23	.20	.26
11	.02	.06	.14	.08	.13	.16
12	.02	.11	.15	.12	.07	.18
13	.07	.17	.17	.23	.14	.19
14	.21	.20	.21	.21	.20	.25
15	.23	.24	.20	.20	.25	.38
16	.08	.12	.11	.13	.07	.18
17	.08	.07	.03	.10	.04	.15
18	.06	.10	.10	.01	.02	.07
19	.10	.18	.13	.17	.16	.12
20	.11	.12	.16	.10	.07	.13
21	.19	.21	.21	.29	.22	.29
22	.09	.17	.15	.27	.11	.29
23	.15	.21	.16	.22	.18	.17
24	.15	.14	.11	.23	.17	.23
25	.22	.24	.21	.30	.20	.26
26	.09	.02	.05	.09	.14	.18
27	.08	.07	.17	.03	.10	.11
28	.11	.13	.15	.14	.15	.22
29	.13	.08	.11	.12	.13	.20
30	.06	.08	.09	.20	.19	.21
31	.05	.05	.12	.16	.13	.14
32	.02	.06	.07	.08	.12	.14
33	.07	.08	.09	.16	.10	.11
34	.05	.13	.24	.15	.17	.14
35	.09	.13	.15	.09	.14	.05
36	.16	.15	.09	.10	.16	.17
37	.14	.15	.10	.22	.14	.11
38	.16	.13	.08	.16	.14	.18
39	.09	.09	.14	.12	.11	.08
40	.02	.06	.12	.08	.17	.10

Item	Self-Boss	Self-Peers	Self-DRs	Boss-Peers	Boss-DRs	Peers-DRs
41	.03	.10	.15	.11	.09	.10
42	.07	.11	.03	.14	.04	.11
43	.09	.09	.08	.17	.15	.09
44	.04	.09	.06	.08	.12	.15
45	.06	.10	.08	.12	.09	.09
46	.10	.13	.14	.17	.09	.10
47	.17	.15	.18	.17	.15	.15
48	.16	.17	.15	.22	.15	.19
49	.14	.14	.11	.20	.18	.20
50	.04	.07	.10	.02	.02	.15
51	.10	.16	.14	.11	.08	.17
52	.12	.15	.12	.13	.15	.13
53	.12	.16	.18	.09	.22	.18
54	.13	.11	.08	.11	.16	.18
55	.10	.09	.07	.12	.09	.11
56	.06	.09	.09	.12	.16	.12
57	.01	.01	.05	.09	.10	.10
58	.11	.20	.19	.20	.17	.24
59	.10	.07	.09	.12	.10	.19
60	.12	.17	.19	.12	.15	.16
61	.10	.08	.17	.25	.12	.20
62	.04	.14	.11	.11	.18	.10
63	.14	.22	.17	.21	.15	.19
64	.06	.08	.06	.08	.00	.06
65	.13	.24	.20	.22	.16	.23
66	.09	.13	.15	.10	.12	.10
67	.17	.16	.19	.18	.13	.21
<i>Mean</i>	.10	.13	.13	.15	.13	.17
<i>Std.</i>	.05	.05	.05	.06	.05	.06
Low end of 90% CI	.02	.04	.05	.04	.05	.06

Table 3.

Between-learners skill-importance correlations

Item	Self	Boss	Peers	DRs
1	.38	.36	.44	.54
2	.39	.37	.36	.42
3	.31	.30	.27	.33
4	.39	.28	.39	.41
5	.39	.47	.52	.57
6	.36	.33	.40	.37
7	.33	.40	.30	.40
8	.25	.29	.38	.44
9	.33	.36	.35	.40
10	.31	.42	.32	.40
11	.26	.29	.32	.39
12	.27	.35	.38	.37
13	.28	.22	.23	.25
14	.50	.44	.54	.58
15	.43	.48	.48	.53
16	.33	.35	.38	.41
17	.25	.42	.41	.42
18	.27	.25	.26	.38
19	.30	.24	.17	.32
20	.26	.24	.25	.31
21	.37	.47	.43	.41
22	.40	.51	.41	.49
23	.38	.35	.28	.36
24	.43	.45	.52	.57
25	.36	.31	.25	.37
26	.28	.36	.37	.48
27	.38	.31	.33	.30
28	.48	.39	.50	.46
29	.28	.40	.38	.41
30	.27	.50	.53	.55
31	.29	.29	.36	.39
32	.38	.42	.43	.44
33	.27	.21	.36	.29
34	.30	.30	.32	.31
35	.30	.33	.33	.40
36	.29	.21	.24	.30
37	.31	.43	.37	.37
38	.34	.32	.41	.51
39	.32	.42	.44	.51
40	.42	.34	.29	.40
41	.22	.23	.30	.30

Item	Self	Boss	Peers	DRs
42	.32	.26	.35	.33
43	.36	.37	.44	.50
44	.31	.28	.37	.42
45	.32	.20	.32	.37
46	.42	.41	.41	.51
47	.33	.34	.38	.40
48	.31	.30	.38	.43
49	.30	.40	.40	.50
50	.29	.29	.37	.37
51	.36	.42	.45	.50
52	.44	.41	.37	.43
53	.43	.37	.37	.56
54	.41	.35	.40	.45
55	.26	.31	.29	.34
56	.37	.32	.33	.34
57	.32	.49	.43	.33
58	.36	.37	.45	.44
59	.33	.33	.32	.35
60	.34	.33	.29	.34
61	.32	.50	.49	.46
62	.26	.34	.35	.42
63	.47	.45	.40	.51
64	.32	.27	.24	.39
65	.43	.32	.37	.38
66	.20	.23	.31	.29
67	.33	.32	.44	.50
<i>Mean</i>	.34	.35	.37	.41
<i>Std.</i>	.06	.08	.08	.08
Low end of 90% CI	.23	.22	.24	.28

Table 4.

Within-learner interrater correlations on skill rating

	<i>Mean</i>	<i>Std</i>	90% CI	
			low	high
Self-Boss	.29	.15	.03	.54
Self-Peers	.29	.16	.02	.56
Self-DRs	.28	.16	.01	.55
Boss-Peers	.31	.16	.04	.58
Boss-DRs	.27	.16	.01	.54
Peers-DRs	.31	.17	.03	.60

N=740

Table 5.

Within-learner interrater correlations on importance rating

	Mean	Std	90% CI	
			low	high
Self-Boss	.21	.15	-.03	.45
Self-Peers	.26	.15	.01	.50
Self-DRs	.24	.15	.00	.49
Boss-Peers	.28	.15	.04	.52
Boss-DRs	.25	.15	.00	.49
Peers-DRs	.32	.15	.06	.57

N=740

Table 6.

Within-learner skill-importance correlations

	Mean	Std	90% CI	
			low	high
Self	.29	.23	-.08	.67
Boss	.31	.25	-.10	.72
Peers	.30	.23	-.07	.68
DRs	.33	.24	-.07	.72

N=740

Table 7.

The correlation between average skill rating and skill-importance correlation by rater sources

Rater Source	<i>r</i>
Self	.31**
Boss	.49**
Peers	.54**
DRs	.59**
All Others	.52**

** $p < .001$

Table 8.

Within-learner skill-importance correlation by skill level

Rater Source	Skill Rating			<i>F</i>	<i>p</i>
	1 std below average	1 std around average	1 std above average		
Self	.18	.29	.42	34.59 (2, 737)	<i>p</i> <.001
Boss	.09	.33	.47	87.53 (2, 737)	<i>p</i> <.001
Peers	.08	.32	.46	107.12 (2, 737)	<i>p</i> <.001
DRs	.07	.34	.51	126.95 (2, 737)	<i>p</i> <.001
All Others	.13	.36	.50	99.91 (2, 737)	<i>p</i> <.001

Note: Numbers in parentheses are degrees of freedom