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A Study of the Relationship between the Consistency of Self- and Other-Evaluation, Attitudes toward Evaluation Feedback and Leadership Behavior Change Intention

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Abstract

This study sought to investigate the current situation of the consistency of self- and other-evaluation in elementary school principals' leadership effectiveness and the difference between different consistencies in attitudes toward evaluation feedback and behavior change intention; to discuss the relationship between elementary school principals' attitudes toward evaluation feedback and their behavior change intention; and to examine the predictive relationship of the consistency of elementary school principals' leadership effectiveness evaluation and attitudes toward evaluation feedback on behavior change intention. The 783 people, including education bureau officials, principals, teachers, and parents, were picked to conduct leadership effectiveness evaluation on 87 elementary school principals based on the ideas and methods of 360 degree feedback. After turning the original scores into z-scores, self- and other-evaluation results were compared and divided into the four categories of

overestimation, underestimation, in-agreement/good and in-agreement /poor. In the current research, the results of self- and other-evaluation were mailed to the 87 principals along with the Questionnaire of Attitudes toward Evaluation Feedback and the Questionnaire of Leadership Behavior Change Intention. With 79 valid questionnaires returned, One-Way ANOVA, Pearson Product Moment Correlation and Multiple Regression Analysis were used for statistical analyses. This study gained important findings as follows: Elementary school principals show high-intermediate approval in attitudes toward overall evaluation feedback and high approval in leadership behavior change intention. There is no significant difference between elementary school principals with different consistencies of self- and other-evaluation in either attitudes toward evaluation feedback or behavior change intention. Elementary school principals' attitudes toward evaluation feedback and behavior change intention are highly correlated. The consistency of self- and other-evaluation and attitudes toward evaluation feedback can effectively predict principals' leadership behavior change intention; attitudes toward evaluation feedback have the best predictability, reaching 54.8 percent.

Keywords: Leadership Effectiveness, 360 Degree Feedback, Consistency of Self- and Other-Evaluation, Attitudes toward Evaluation Feedback, Behavior Change Intention

Introduction

Principals' leading methods, leading performances and leading styles have a deep impact on school development and even affect the effectiveness of students, teachers, staff, and the whole school (Alammar, 2015; Leithwood & Jantzi, 2008; Orr & Orphanos, 2011; Robinson, Lloyd, & Rowe, 2008). Principal's leadership effectiveness plays such a vital role in the development of school affairs (Sergiovanni, 1995). However, leadership effectiveness is a complex concept with various interpretations. It seems unlikely to make judgement from single source, by one evaluator, or based on one single theory. Nonetheless, competing values framework can efficiently incorporate four important effectiveness theories in organizations. Its janusian thinking can help integrate the contents of leadership effectiveness.

The importance of effectiveness feedback in the process of effectiveness evaluation is drawing more and more attention from administrators and bringing about discussion by

scholars (Bracken & Church, 2013; Day, & Dragoni, 2015; Day, Fleenor, Atwater, Sturm, & McKee, 2014; Frauman, 2013; Markham, Markham, & Smith, 2015; Mishra, 2014). Many studies indicate that accurately offering effectiveness feedback to leaders or supervisors and letting them know their working performances benefit change of leadership behavior and even improve leadership effectiveness (Amundsen & Martinsen, 2014; Day & Dragoni, 2015; Kopperud, Martinsen, & Humborstad, 2015). In recent years, enterprises and organizations have adopted 360 degree feedback system, even combining the use of big data (Brown, Lin, & Inceoglu, 2017; Markham, Markham, & Smith, 2017). In utilizing 360 Degree Self- and Other-Evaluation, leader's attitude toward effectiveness evaluation is an issue worthy of discussion and has become focal point in relevant research (Cheng & Wu, 2009; Lepsinger & Lucia, 2009). 360 degree evaluation comprises self-evaluation (evaluatees themselves) and other-evaluation (seniors, subordinates, colleagues, customers, etc.). Evaluatees compare the results of self-evaluation and other-evaluation, which can lead to the problem of inconsistency between the two results. Besides, whether this feedback causes principals to produce leadership behavior change intention remains to be unearthed (Smither, London, & Reilly, 2005). For this reason, this study used elementary school principals as research subjects to explore the relationship between the consistency of self- and other-evaluation in 360 degree leadership effectiveness, attitudes toward evaluation feedback and leadership behavior change intention.

In brief, the main purposes of this study are to analyze the current situation and difference of the consistency of self- and other-evaluation in elementary school principals' leadership effectiveness, attitudes toward evaluation feedback and behavior change intention, to discuss the relationship between elementary school principals' attitudes toward evaluation feedback and behavior change intention, and to examine the predictability of the consistency of self- and other-evaluation and attitudes toward evaluation feedback on behavior change intention.

Literature Review

Principal's Leadership Effectiveness

Researchers often define leadership from their own perspectives and interests. Literature (Yukl, 2013) also found that most research in the measure of leadership effectiveness focused on the effects of leadership behavior upon members and stakeholders. The concept of leadership effectiveness, just like the definition of leadership, varies from theory to theory.

Nevertheless, the meta-theory, competing values framework, effectively integrates four important theories in organizations. The key point is to form four quadrants with the horizontal axis *internal vs. external* and the vertical axis *flexibility vs. control*. Its main content is described below (Quinn & McGrath, 1985):

Rational goal model: In the lower-right quadrant, this model emphasizes task-based leadership effectiveness. The organizational values of this market are competitiveness and productivity.

Open systems model: In the upper-right quadrant, this model emphasizes adaption-based leadership effectiveness. The main goals include innovation, adaption, growth, external supports and resources acquisition. Flexibility and external focus, such as innovation and creativity, are stressed.

Human relations model: In the upper-left quadrant, this model emphasizes trust and belonging-based leadership effectiveness. The main goals are cohesion, participation, morale and communication, highlighting flexibility and internal focus.

Internal process model: In the lower-left quadrant, this model emphasizes stability and control-based leadership effectiveness. Individuals are assigned certain roles and are expected to act by the rules.

In summary, this study defines principals' leadership effectiveness as: the processes and results that principals consider the organizations' internal and external contexts and apply their leadership strategies to improve organizations' goal achievement and competitive advantages, emphasize organizations' reforms and deal with external needs, enhance satisfaction of organization members and human resources development, and maintain the stable operation in organizations and good internal integration (Cheng, 2006, 2007, 2012).

Consistency of 360 Degree Self- and Other-Evaluation and Attitudes toward Effectiveness Evaluation Feedback

360 degree feedback is to conduct evaluation on a specific individual through several evaluators, including the evaluatee (Tornow, 1993), i.e., implement multidimensional effectiveness evaluation through self-evaluation and other- evaluation on the target object. The main idea is to make all-round evaluation on the evaluatee's leadership performances or leadership effectiveness assessed by the evaluatee, superiors, direct subordinates, colleagues and even external customers; that is, to adopt self-evaluation and other-evaluation at the same

time and provide feedback after the evaluation. This evaluation method is believed to offer more advantages compared with single source evaluation (Bracken & Rose, 2011; Fleenor & Prince, 1997) and to have a vital influence on members' organizational behaviors (Deshpande, Bhanot & Maknikar, 2015; Hammerly, Harmon, & Schwaitzberg, 2014; Karkoulian, Assaker, & Hallak, 2016; Markham, Markham, & Smith, 2015; Nowack & Mashihi, 2012).

Atwater and Yammarino (1997) categorized evaluatees by the difference between self- and other-evaluation into overestimators (self-evaluation higher than other-evaluation), underestimators (self-evaluation lower than other-evaluation), in-agreement/good raters (evaluatee's other-evaluation score higher than the average of all other-evaluation scores), and in-agreement/poor raters (evaluatee's other-evaluation score lower than the average of all other-evaluation scores). This four-category model is shown in Figure 1. Among the four types, the most common type is the overestimator. These people tend to have a negative attitude or hostility towards feedback from others, and cannot see their own shortcomings. They are prone to conflict with their superiors or peers, etc. In addition, studies have shown that overestimators often have poor job performance and are prone to career disorganization, but they are the most productive when they accept feedback from others and see it as effective. There may be a strong motivation to change behavior (Atwater & Yammarino, 1997; Bass & Yammarino, 1991; Van Velsor et al., 1992). As for undervalued people, they tend to show a lower sense of self-worth and achievement motivation, and they are not very clear about their potential, etc., but these people have a more complicated relationship with organizational results, and sometimes they can promote the improvement of organizational results; and Sometimes it leads to negative results. The ideal situation is "consistent/high", these people can understand their evaluation in the eyes of others, are willing to accept positive feedback from others, willing to use others' feedback to change their behavior, etc., and have good work performance and Leadership skills, therefore, can be expected to produce very positive personal and organizational outcomes. The last group is the "consistent/low", these people are usually low self-esteem, low self-worth, poor ability, etc., and have poor job performance,

few promotion opportunities, high turnover rate, and take little action to improve Efficacy.

Generally speaking, the key of evaluation feedback research lies in how feedback is perceived and responded by receivers (Kinicki, Prussia, Wu, & McKee-Ryan, 2004).

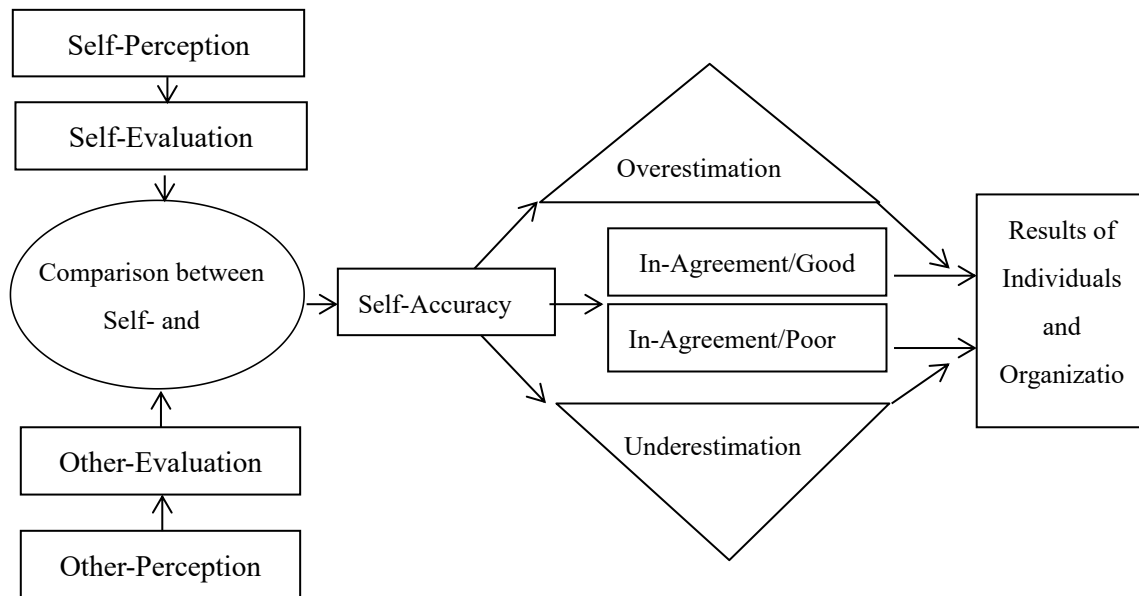


Figure 1. The model of self- and other-evaluation consistency.

Source. Atwater & Yammarino (1997: 125).

The results of evaluation should be provided as feedback for members after their effectiveness is evaluated and help them improve in the future. Yet, can the feedback prompt members to yield positive behavior change? While this has been verified in many studies (for example, Fleenor, Taylor, & Chappelow, 2008; Gumustekin, Ozler, & Yilmaz, 2010; Tosti & Addison, 2009), the critical factor is evaluatees' attitudes toward evaluation feedback, that is, their perceived acceptance and fairness of this kind of evaluation feedback and the cognition of acceptance and fairness toward the feedback results. If members perceive feedback as *accurate assessment* and from reliable sources, they will have more positive responses (Brett & Atwater, 2001).

One of the main purposes for the organization to implement effectiveness evaluation is to offer individuals feedback and let individuals precisely understand their advantages and disadvantages through feedback from different perspectives and further improve their deficiencies. Besides, before receiving feedback results, individuals will imagine the possible results they will get based on their experiences and expectations (Folger, 1987). Several

research findings (Taylor, Fisher & Ilgen, 1984) indicated that the fact that individuals produced different responses after receiving feedback was due to the gap between the expected results and the real feedback results.

It is pointed out in the study (Taylor, Fisher, & Ilgen, 1984) that the reason why individuals react differently after receiving feedback is because of the gap between the individual's expected results and the feedback results. In addition, Fecteau, Fecteau, McGonigle & Fredholm (1999) found in the study of supervisors' feedback attitudes towards subordinates and colleagues that the higher the evaluation results of subordinates, the more acceptable and correct the evaluation results were by the supervisor; , the more positive the feedback, the more acceptable the result of the evaluation. Hazucha, Hezlett & Schneider (1993) also believed that people will have a more positive response when they receive positive feedback, and in the 360-degree feedback system, when the supervisor's rating is lower, the respondent's response will be more negative. That is, supervisors will react negatively when there is a gap between their expected scores.

As a consequence, when effectiveness feedback is offered to individuals, individuals will compare the results of self- and other-evaluation; in this process, the issue of consistency between self- and other-evaluation arises. In turn, they will produce different results in the subsequent behavior change intention. From above discussion, the current study proposed Hypothesis 1:

H1: There is significant difference in attitudes toward evaluation feedback between different self- and other-evaluation consistencies of principals' leadership effectiveness.

Consistency of 360 Degree Self- and Other-Evaluation and Leadership Behavior Change Intention

Behavior change intention means that individuals desire to become better and closer to the status which is supposed to or expected to achieve (Taylor & Todd, 1995). Behavior change intention can be positive or defensive. As long as evaluatees accept and perceive accuracy and fairness of the feedback, they are likely to develop their strengths and improve their weaknesses based on the feedback. Therefore, this kind of perception is the basic for continuous behavior change (Bracken & Rose, 2011).

As self-consistency theory posits, when there is a gap between self- and other-evaluation, individuals, to keep the balance of self-awareness, will produce behavior change motive in behavior change intention in order to shorten the gap. (Karkoulian, Assaker, & Hallak, 2016)

Research pertaining to the consistency of self- and other-evaluation and leadership effectiveness, satisfaction of 360 degree feedback, or the perception of evaluation accuracy suggested that evaluatees with different consistencies of self- and other-evaluation indeed displayed substantial differences in the above mentioned variables(Karkoulian, Assaker, & Hallak, 2016) Accordingly, the present study posited Hypothesis 2:

H2: There is significant difference in leadership behavior change intention between different self- and other-evaluation consistencies of principals' leadership effectiveness.

Attitudes toward Evaluation Feedback and Leadership Behavior Change Intention

Whether effectiveness feedback can stimulate staff to produce positive behavior change or not has been the research focus of many scholars (Atwater, Waldman, Atwater, & Cartier, 2000). One of the often discussed topics is the phenomenon of inconsistency between evaluatees' and evaluators' feedback. Through the discrepancy between self- and other-evaluation, the individual's self-awareness is raised and the gap between goals and working effectiveness is highlighted, which further points out what the evaluatee needs to improve (Tornow, 1993). Atwater and Yammarino (1997) claimed that self-evaluation could be affected by bias, such as *leniency* and *social desirability*, and that self-serving bias and exaggeration happened a lot in self-evaluation. Many studies related to self-evaluation also revealed that boast and self-abasement coexisted when individuals made self-evaluation (Atwater & Yammarino, 1997; Church, 1997).

Waldman and Bowen (1998) believed that members' acceptability of 360 degree evaluation could be measured by their attitudes toward evaluation. The cognitive domain refers to the judgment of feedback accuracy and the fairness perception of the feedback system. The affective domain is the acceptability of feedback results and the attitudes toward effectiveness feedback evaluation system. The behavioral domain involves changing individual behavior directions and changing the amount of individual effort. From the perspective of cognitive psychology, when individuals receive stimuli (evaluation results), cognitive interpretation or selection is needed to produce responses (behavior change). Furthermore, the perception of the consistency of self- and other-evaluation in leadership effectiveness can differ because of evaluatees' perceptions shaped by personal traits. Evaluatees' perceptions of attitudes toward evaluation feedback (including the acceptance and fairness of the feedback system and feedback results) are closely connected to their subsequent leadership behavior change intention. Similar findings have been acquired in many studies (Bergner, Davda, Culpin, &

Rybnicek, 2016; Braddy, Gooty, Fleenor, & Yammarino, 2014; Byrd, Martin, Nichols, & Edmondson, 2015; Dobewall, Realo, Allik, Esko, & Metspalu, 2013; McKee, Yih-teen & Antonakis, 2015). Based on above discussion, Hypothesis 3 of this study was proposed:

H3: Principals' attitudes toward evaluation feedback and their leadership behavior change intention are significantly correlated.

Consistency of 360 Degree Self- and Other-Evaluation, Attitudes toward Evaluation Feedback, and Leadership Behavior Change Intention

As research pointed out (Atwater & Yammarino, 1992; Bass & Yammarino, 1991), overestimators tend to have poor working performances, but if overestimators can accept others' feedback and believe it is effective, they may produce intense motive for behavior change (Waldman et al., 1998). Underestimators have tendencies toward lower self-worth and lower achievement motivation, but sometimes they may bring about promotion of organizational results. The ideal situation is in-agreement/good. These people can understand the appraisals of themselves in other people's views, embrace others' positive feedback and take advantage of the feedback to change their behavior. In contrast, in-agreement/poor usually have low self-worth and bad working performances. They seldom take action to improve their effectiveness (Atwater & Yammarino, 1997). Prediction research exploring self-consistency theory even found that supervisors who belonged to in-agreement/poor had no significant difference in the second other-evaluation score (Smither & Reilly, 2001). Another research (Bergner et al., 2016) also found that the consistency of self- and other-evaluation in leadership effectiveness has a close relationship with evaluatees' attitudes toward evaluation feedback system and feedback results, even extending to leadership behavior change intention and actual leadership behavior change. According to above arguments, this study posited Hypothesis 4:

H4: The consistency of self- and other-evaluation in elementary school principals' leadership effectiveness and attitudes toward evaluation feedback have significant predictability on leadership behavior change intention.

Methodology

Research Framework

Explanation (Figure 2):

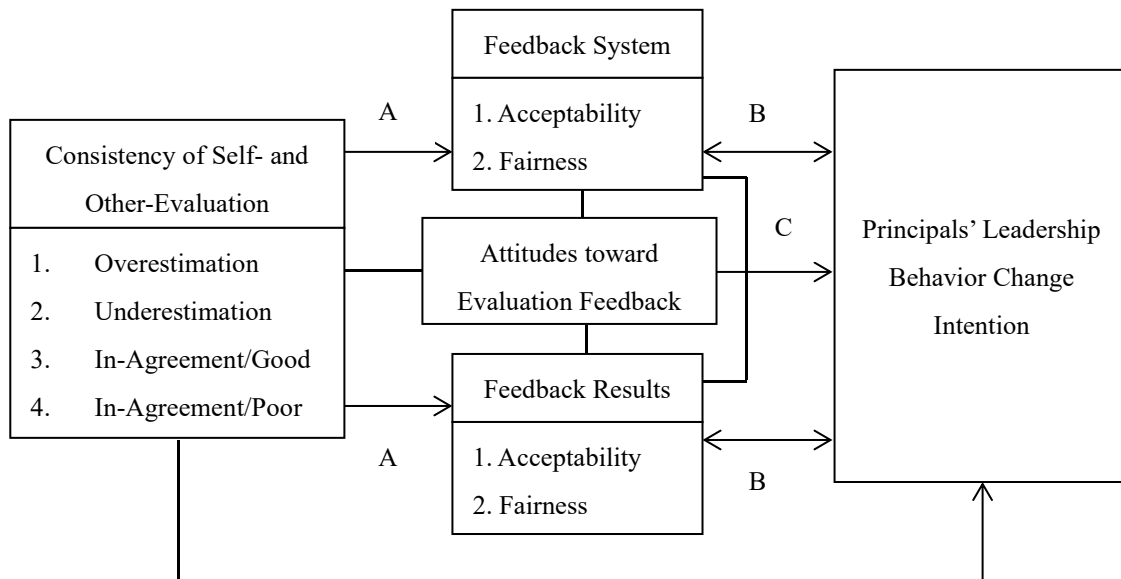


Figure 2. The framework of this study.

Source. The authors'.

Pathway A: To analyze the differences between different consistencies of self-and other-evaluation in attitudes toward evaluation feedback (feedback system and feedback results) and principals' leadership behavior change intention.

Pathway B: To clarify the correlation of attitudes toward evaluation feedback and principals' leadership behavior change intention.

Pathway C: To examine the predictive relationship of the consistency of self-and other-evaluation and attitudes toward evaluation feedback on principals' leadership behavior change intention.

Research Object

In the pilot study, each principal' leadership effectiveness was evaluated through questionnaire survey with self-evaluation and other-evaluation (8 other-evaluators, including education bureau officials, principals, teachers and parents). Samples of other-evaluation were selected by the criterion that the evaluators had more chances to observe the evaluated principals, for example, inspectors, principals of adjacent schools, teachers concurrently serving as administrators of school affairs, presidents of parents' associations, etc. After the questionnaire was collected, after statistical analysis, the original scores were converted into Z scores, and the principal's self-assessment was compared with the scores of other assessors.

The Z score greater than 1 was overestimated, the score less than -1 was underestimated, and the score between 0 was underestimated. Between 0 and -1 is consistent/high, and between 0 and -1 is consistent/low.

At the stage of this study, after the 87 principals in the pilot study granted their permission, the results of self- and other-evaluation were mailed to them with the Questionnaire of Attitudes toward Evaluation Feedback and the Questionnaire of Behavior Change Intention. Eighty-five copies were returned, 79 of which were valid, with the response rate approximately 91 percent.

Research Tool

Questionnaire of Attitudes toward Evaluation Feedback. This questionnaire with 18 items in total was comprised of two dimensions, feedback system and feedback results, with two sub-dimensions, *acceptability* and *fairness*, under each dimension. Using a 6-point scale, this questionnaire was mostly adapted from the questionnaires by Cheng (2012), by Bernardin, Dahmus, and Redmon (1993) and by Furnham and Stringfield (1998). The higher principals' attitudes toward the feedback system and toward the feedback results scored, the more they could accept the system and results and identify with their fairness. The eigenvalues of the two dimensions in this questionnaire were 6.445 and 7.863, explained variances 80.565 and 78.626, α coefficients .963 and .969, and its overall α coefficient .982. The questionnaire showed good validity and reliability.

Questionnaire of Behavior Change Intention. The purpose of this questionnaire was to assess evaluatees' willingness to use the results of evaluation feedback to improve their working performances. A 6-point scale, this questionnaire extended the items of the questionnaires developed by Cheng (2012) and by McDonald (1997). There were 6 items in this revised version and its eigenvalue was 4.588, explained variance 76.471, the factor loading of each item between .817 and .916, and α coefficient .929, which showed good validity and reliability.

Data Analysis

The questionnaires were collected and statistically analyzed, the original scores were turned into z-scores, and self- and other-evaluation results were compared. The z-score which was higher than 1 belonged to overestimation, lower than -1 belonged to underestimation, between 1 and +1 belonged to in-agreement/good, and between 0 and -1 belonged to in-agreement/poor. The statistics will be used as follows : One-Way ANOVA, Pearson

Product Moment Correlation and Multiple Regression Analysis were used for statistical analyses applied to test the hypothesis of this study.

Research Process

The pilot study conducted questionnaire survey of self- and other-evaluation on 87 elementary school principals' leadership effectiveness. And 783 people, including education bureau officials, principals, teachers, and parents, were picked to conduct leadership effectiveness evaluation on 87 elementary school principals

At the stage of this study, after turning the original scores into z-scores, self- and other-evaluation results were compared and divided into the four categories of overestimation. The results of self- and other-evaluation were mailed to the 87 principals along with the Questionnaire of Attitudes toward Evaluation Feedback and the Questionnaire of Leadership Behavior Change Intention.

Results and Discussion

The Analysis of the Current Situation of Elementary School Principals' Attitudes toward 360 Degree Self- and Other-Evaluation

Table 1 shows research findings on current elementary school principals' attitudes toward evaluation feedback. The average score of each item in elementary school principals' overall attitudes toward 360 Degree Self- and Other-Evaluation was 4.80, with the approval rate reaching slightly high level. In the feedback system dimension, the average score of each item was 4.82, belonging to slightly high approval rate. Acceptability of the system had higher approval tendency(4.88), while fairness of the system showed average approval rate(4.65). As to attitudes toward feedback results, the average score was 4.79, and the approval level was slightly high. Acceptability of feedback results had slightly higher approval tendency (4.97), while fairness of feedback results showed relatively lower approval level (4.67).

Source. The authors'.

Table 1. Means and Standard Deviations of Elementary School Principals’ Attitudes toward 360 Degree Self- and Other-Evaluation

Attitudes toward Evaluation Feedback	Mean	Standard Deviation	Number of Items	Average Score of Each Item
Attitudes toward Feedback System	38.53	7.21	8	4.82
Acceptability of System	29.27	5.41	6	4.88
Fairness of System	9.27	1.96	2	4.63
Attitudes toward Feedback Results	47.89	8.88	10	4.79
Acceptability of Results	19.87	3.67	4	4.97
Fairness of Results	28.01	5.49	6	4.67
Overall Attitudes toward Evaluation Feedback	86.42	15.88	18	4.80

The Analysis of the Difference between Consistencies of Self- and Other-Evaluation in Attitudes toward Evaluation Feedback

To understand the consistency of principals’ leadership effectiveness evaluation, this study turned scores of self- and other-evaluation into z-scores, which were then divided into the four categories of overestimation, underestimation, in-agreement/ good, and in-agreement/poor (see *methodology* above for categorization details). The difference between the four types of consistency in feedback system and feedback results is shown in Table 2. It turned out that the consistency of self- and other-evaluators of elementary school principals’ leadership effectiveness did not reach significance in feedback system and feedback results (F value was 1.51 and 1.80, $p > .05$). To conclude, Hypothesis 1 “*There is significant difference in attitudes toward evaluation feedback between different self- and other-evaluation consistencies of principals’ leadership effectiveness*” was not supported.

Effectiveness evaluators from different sources have different interactive experiences with the evaluatees and thus have different viewpoints on observation and assessment, which leads to inconsistency of evaluation results. Some research clarified that the reason of different responses being produced after individuals received feedback was the gap between individuals’ expected results and the real feedback results (McKee, Yih-teen & Antonakis, 2015). Consequently, when individuals receive feedback, they will compare other-evaluation with self-evaluation, and the problem of consistency of self- and other-evaluation comes about in this process. However, some scholars do not consider *inconsistency* a problem. They

believe it is an informative indicator; if all feedback is consistent, there will be no necessity to collect diverse information (Murphy & Cleveland, 1995).

Table 2. Difference between Consistencies of Self- and Other-Evaluation in Attitudes toward Evaluation Feedback

Dimension	Degree of Consistency of Evaluation	Number of People	Mean	Standard Deviation	<i>F</i>
Feedback System	(1) Overestimation	18	35.50	10.83	1.51
	(2) Underestimation	9	40.67	5.22	
	(3) In-Agreement/Good	31	39.23	5.61	
	(4) In-Agreement/Poor	21	39.19	5.76	
Feedback Results	(1) Overestimation	18	43.94	13.58	1.80
	(2) Underestimation	9	51.22	6.20	
	(3) In-Agreement/Good	31	48.61	6.87	
	(4) In-Agreement/Poor	21	48.76	6.63	

The Analysis of Current Situation of Elementary Principals' Behavior Change Intention

Table 3 exhibits the statistical analysis results of leadership behavior change intention that elementary school principals produced after receiving evaluation feedback results from different evaluators. The mean of elementary school principals' behavior change intention was 5.43, which belonged to high-level behavior change intention. It was known from the findings that after getting evaluation feedback results, elementary school principals could comfortably face evaluation results, contemplate on the corresponding improvement mechanism and produce high behavior change intention.

Table 3. Mean and Standard Deviation of Elementary School Principals' Behavior Change Intention (*N* = 79)

Behavior Change Intention	Mean	Standard Deviation	Number of Items	Average Score of Each Item
	32.58	3.61	6	5.43

Source. The authors'.

The Analysis of the Difference between Consistencies of Self- and Other-Evaluation in Behavior Change Intention

This study investigated the difference between different degrees of consistency of principals' leadership evaluation in their behavior change intention and the results are shown in Table 4. The consistencies of principals' leadership evaluation divided into overestimation, underestimation, in-agreement/good and in-agreement/poor, and the number of people in each category was 18, 9, 31 and 21 respectively. Obviously, the category of in-agreement/good had more people than the other categories, but none of them reached significance in behavior change intention (F value was 0.86 and 1.80, $p > .05$). In conclusion, Hypothesis 2 "*There is significant difference in leadership behavior change intention between different self- and other-evaluation consistencies of principals' leadership effectiveness*" did not acquire support.

Literature (Markham, Markham, & Smith, 2017) claimed that individuals' expectations of evaluation results could affect their responses and feelings and subsequently influence behavior change intention. However, this study did not obtain such findings, which was probably due to a relatively small population of this study. This requires further examination by future research.

Table 4. Difference between Consistencies of Self- and Other-Evaluation in Behavior Change Intention

Dimension	Degree of Consistency of Evaluation	Number of People	Mean	Standard Deviation	F
Behavior Change Intention	(1) Overestimation	18	31.50	4.44	.86
	(2) Underestimation	9	32.33	4.33	
	(3) In-Agreement/Good	31	32.81	3.41	
	(4) In-Agreement/Poor	21	33.29	2.72	

Source. The authors'.

The Analysis of the Relationship between Principals' Attitudes toward Evaluation Feedback and Behavior Change Intention

The analysis of the relationship between principals' attitudes toward evaluation feedback (including feedback system and feedback results) and their behavior change intention is shown in Table 5. The research findings indicated a positive correlation between attitudes toward overall evaluation feedback and behavior change intention ($r = .661, p < .01$), and

positive correlations between principals' attitudes toward feedback system and toward feedback results and their behavior change intention ($r = .658, p < .01$; $r = .650, p < .01$). Consequently, Hypothesis 3 "*Principals' attitudes toward evaluation feedback and their leadership behavior change intention are significantly correlated*" was confirmed. This result concurred with prior research findings (Amundsen & Martinsen, 2014; Day & Dragoni, 2015). In other words, the higher approval level principals' attitudes toward evaluation feedback reached, the higher principals' behavior change intention was. For principals, 360-degree feedback can help principals see blind spots, as found in some studies (Cacioppe & Albrecht, 2000).

Table 5. The Relationship between Attitudes toward Evaluation Feedback (Feedback System and Feedback Results) and Behavior Change Intention

Variable	Feedback System	Feedback Results	Attitudes toward Evaluation Feedback
Behavior Change Intention	.658**	.650**	.661**

1.** $p < .01$

2. *Source.* The authors'.

The Prediction Analysis of Principals' Leadership Behavior Change Intention by the Consistency of Self- and Other-Evaluation and by Attitudes toward Evaluation Feedback

To discover whether principals' leadership behavior change intention was affected by the consistency of self- and other-evaluation and by their attitudes toward evaluation feedback, this study used stepwise multiple regression, analyzing the joint explanatory power of each predictor variable for criterion variables. The statistical analysis result is shown in Table 6. It was found that only predictor variable, *attitudes toward evaluation feedback* entered significant variables in regression equation. They could account for 43.8 percent of total variance of principals' leadership behavior change intention. As the standardized regression coefficients were positive, attitudes toward evaluation feedback had a positive effect on principals' leadership behavior change intention. Hence, Hypothesis 4, the consistency of self- and other-evaluation in elementary school principals' leadership effectiveness found no significant predictability on leadership behavior change intention, but predictive explanatory power of attitudes toward evaluation feedback was confirmed. The results of this study are the same as those of Smither & Reilly (2001). In their prediction research on the theory of self-consistency, it was found that supervisors whose self-evaluation and others' evaluations

were consistently low and had no significant difference in the second others' evaluation scores.

The basic hypothesis of "efficacy feedback" is that through the difference between "self-evaluation" and "other-evaluation", the individual's "self-awareness" can be improved, and the gap between goals and work performance can be highlighted, and then pointed out where individuals need improvement (Smither, London, & Reilly, 2005; Tornow, 1993). However, it is worth noting that many studies have found that "efficiency feedback" does not have a positive impact on all members. Some employees have not improved or even decreased after receiving feedback. Performance feedback may not necessarily be effective. Promoting improved performance, one-third of supervisors in their analysis actually reduced job performance (Atwater, et al., 2000; Smither, et al., 2005). These studies show that there are many individual differences in the subsequent behavioral responses of individuals after receiving feedback. Therefore, Smither et al. (2005) believe that the use of "other-rating" feedback to predict the behavior change of the respondent has predictive power but cannot fully explain all the phenomena.

Table 6. Regression Analysis of Principals' Leadership Behavior Change Intention Predicted by Consistency of Self- and Other-Evaluation and Attitudes toward Evaluation Feedback

Picked Variable	R	R ²	R ² Increment	F Value	β Value	Standardized β coefficient
Attitudes toward Evaluation Feedback	.661	.438	.430	59.901**	.150	.661

1. ** $p < .01$

2. *Source.* The authors'.

Conclusion

Elementary school principals' attitudes toward overall evaluation feedback reached high-intermediate approval and acceptability, with acceptability higher than their perceived fairness of the feedback system as well as the feedback results. To put it differently, principals accepted the utilization of 360 degree feedback system as the evaluation system for leadership effectiveness and also accepted the feedback results it offered. Nevertheless, there was relatively lower approval in fairness of the feedback system and feedback results.

Self- and other-evaluation scores were compared to divide the consistency of elementary school principals' self- and other-evaluation into overestimation, underestimation, in-agreement/good and in-agreement/poor. Nonetheless, these four categories had no significant difference in either attitudes toward feedback system, attitudes toward feedback results, or leadership behavior change intention.

After receiving evaluation feedback results, elementary school principals highly accepted the use of 360 degree feedback as the reference for their leadership behavior change intention.

There was a high correlation between elementary school principals' attitudes toward evaluation feedback and behavior change intention. That is to say, when principals have higher degree of approval on attitudes toward evaluation feedback, their leadership behavior change intention would be higher as well.

The consistency of self- and other-evaluation and attitudes toward evaluation feedback could not effectively predict principals' leadership behavior change intention; attitudes toward evaluation feedback had the best predictability with explanatory power of 43.8%.

Suggestion

It is necessary to reduce elementary principals' resistance and gap to 360 Degree Self- and Other-Evaluation. As this study pointed out, elementary school principals' approval of 360 degree feedback system was high-intermediate, but the approval of fairness of the system and the results was comparatively lower. It was also found that principals' attitudes toward evaluation feedback could affect their behavior change intention. Therefore, in order to elevate principals' leadership behavior change intention, it is practicable to do case-sharing, such as data sharing of successful cases relating to 360 degree feedback and personal experience sharing by those who have accepted 360 degree feedback.

It is advisable for elementary school principals to control and adjust their leadership effectiveness by using diverse information. In this study, the phenomenon of *complacency*, being more lenient than others in optimistically evaluating oneself, existed in principals' leadership effectiveness self-evaluation. Thus, principals are supposed to adopt multiple thinking, assess their leadership effectiveness from an open angle and accept others' opinions so as to persistently improve their leadership effectiveness.

Efficacious effectiveness evaluation feedback mechanism should be constructed to inspire

principals' leadership behavior change. This study suggested that principals' attitudes toward evaluation feedback had the best predictability on behavior change intention. If principals' acceptance of 360 Degree Self- and Other-Evaluation can properly reinforced and their understanding of the fairness of the system can be increased, it is certain to encourage principals' intention of change and further enhance leadership effectiveness.

Knowledge of 360 degree feedback evaluation should be stressed and promoted effectively in training activities. The education field lacks understanding about 360 degree feedback evaluation. Hence, when the implementation of 360 degree feedback evaluation system is to be promoted, educational administrative authorities or schools should arrange the introduction of 360 degree feedback in the training courses and experimentally conduct principal leadership effectiveness evaluation with the aid of this evaluation model.

Future research is recommended to trace whether elementary school principals' high leadership behavior change intention can prompt the enhancement of leadership effectiveness. This study revealed promising results that elementary school principals highly accepted to use 360 degree feedback as the reference for leadership behavior change intention. Yet, can change of intention really lead to change of leadership behavior performance? This is another question that is worth follow-up research.

Data availability

- The datasets generated during and/or analysed during the current study are not publicly available due [REASON(S) WHY DATA ARE NOT PUBLIC] but are available from the corresponding author on reasonable request.].

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