

## A 360 Degree Performance Appraisal Model for Documents Digitizing Firms

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**Abstract.** Performance appraisal is a process that people can compare their perceptions of working with major manufacturers' perceptions. However, when assessment is done from different sources that are related with self-assessment, called performance appraisal 360 degree. Given the importance of Performance appraisal by 360 degree feedback in organizations, a model has been provided for 360 degree performance appraisal of firms that digitize documents. The model was confirmed 40 experts by questionnaire method, Also reliability of the questionnaire was confirmed by Cronbach's Alpha. The model was implemented in a similar firm. By determining of expectations and criteria of performance evaluation of each sector the other sectors, The final 17 different performance evaluation forms were developed that will be completed by its members and customers to performance evaluation of the other employees. The results of data and review it and recommendations were provided, improve the productivity of the organization.

**Keywords:** Performance appraisal; 360 degree feedback; performance evaluation criteria; proposed model.

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## 1. Introduction

In the present day competitive world only the organizations can remain in this world that uses their sources in the best manner. One of the important organizational sources is man power. With regard to the case that the employees need to know the organization's expectations from themselves and the rate of their appraisal for removing their past deficiencies and also promoting effectiveness and efficiency as well as finding their abilities, appraisal of man power performance is a very important procedure and one of the most sensitive problems for the authorities in the organization. In many of the organizations the employees are not informed sufficiently for their performance manner and they do not know that their performance is desired or undesired, or whether there is an improvement in their performance. In fact, the employees believe that the directors do not wish to satisfy these needs that today it is one of the great challenges for the organizations. Thus the directors shall give feedback to the employees who have better performance, and not to waste most of their time for improving the behavior of the troublesome employees [12].

The system of performance appraisal is the process of recognition, evaluation and development of the individuals' performance for achieving to the individual and organizational purposes [8]. And it helps the individuals to compare their comprehension in their working environment with the comprehension of the important appraisers. Performance appraisal is analyzing the successes and failure of an individual and studying his/her competencies for the future job training and promotion [15]. In other words, performance appraisal is for this case that what works shall be performed in which places in order to become more successful, the final purpose of performance appraisal is increasing effectiveness and efficiency. Today the organizations have found that performance appraisal system has abundant power to the extent that it can change the organization's culture [1].

In an organization, performance appraisal is a way that through which the employees' performance information is obtained for important decision makings such as: salary and wage, propaganda, recognition of

training and development needs via the performance level or their behaviors. In addition an evident relation is observed between performance appraisal and the employees' approaches, behaviors and efforts that indicate the improvement of obtained financial results by the organization [10].

In order that the directors make the employees aware of their performance manner, they shall become familiarized with the newest feedback skills and create an appropriate method for presenting the continuous feedback in the organization[21] that consist of some methods such as: privileging method, obligatory selection method, method of registering sensitive events, the method based on purposeful management, degree method, individual to individual comparison method, feedback method, that the feedback method itself consists of 180, 360, 540 & 720 degree feedback.

In a research it was determined that in case that the appraisers are unknown, the appraisal will be performed more real. When the appraisers had been known, they liked to perform a positive appraisal and regard the realities in their appraisal less. This weakness which mostly was observed in the 180 degree appraisals became a base for the research and creation of more challenging models such as 360 degree feedback that plays important role in the process of obtaining organization's feedback [17].

The process of performance appraisal is based on the views of various appraisal groups which are in relation with the appraised employees, in fact they express that how the employees can develop and improve their job. This process, including each individual's view is about him/her as well. This type of performance appraisal is called 360 degree appraisal or inseparable appraisal [9] that dominates on some of the defects of traditional appraisal such as non-objectivity, bias or halo errors [6,10]. Other common terms that are used for 360 degree feedback consist of: "Beneficiaries appraisal", "multi-criteria feedback", "Multi-source appraisal", "subordinates appraisal", "Group appraisal", "multi-lateral or multi-degree appraisal" [14].

Also the definition of Ward [20] from 360 degree appraisal is this: Regular compilation of a group or an individual's performance feedback data

that has been obtained from some beneficiaries in the performance.

In order to recognize the importance of improvement for Presenting services, 360 degree method was executed for performance appraisal from 1993 to help the managers in the organizations that the purpose is creating some routes for getting information and accelerating the approach of client-centering and also improvement in the culture of giving services [7].

In the literature, we can find various appraisal frameworks for expressing the appraiser's views which can be summarized in two various research lines. From one side, we can find traditional methods that present numerical appraising framework and are numerical results [6], and from the other side we can find other methods that

Language appraisal framework in those appraisals is presented in various language criteria in those appraisals with regard to the appraiser's knowledge [3, 4]. As it is observed in figure 1, 360 degree appraisal generalizes feedback entrance information from one up down mono dimensional approach to an up down multi dimensional (subordinates, colleagues & clients) approach [14].

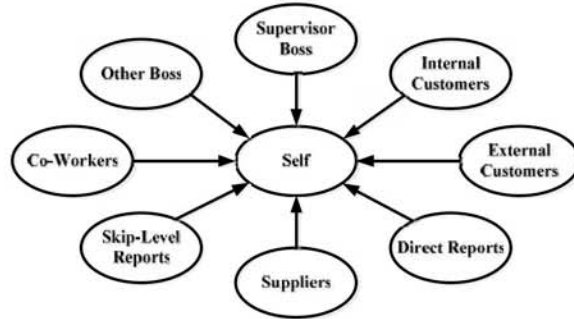


Figure 1. Sources of Performance Appraisal.

### The Phases for 360 Degree Feedback Process:

1. To determine 360 degree Feedback Purpose: This purpose shall be specified in the beginning of the process and to be related to all the involved beneficiaries in the process.

2. To select data collection tools: There are some questionnaires that are completed by the appraisers, some of the organizations used interview as well.

3. To make decision in some cases: In this field, it is recommended that real behavior of the individual to be considered instead of his/her general characteristics. The behaviors that are appraised shall be resulted from the organization's perspective and values.

4. To make decision concerning feedback receivers: In this phase feedback receivers are determined. In the managerial literature, this belief is mentioned that the individuals shall be volunteered for participating in the feedback plan. Compulsory participation can endanger system effectiveness.

5. To train the appraisers and appraised people: training the appraised people is essential in the field of accepting negative feedback. The appraisers shall become aware in the field of various appraisal errors that may occur.

6. Feedback receivers select the appraisers: This is one of the literary fields which are argumentative due to this reason that some of the writers feel that the receivers may select some of the appraisers in their appraisal who create easier atmosphere.

7. To distribute questionnaire: The questionnaire has two forms. One method is paper and pen format and the other method is sending disk to each one of the appraisers.

8. To analyze feedback information: In this stage feedback information are collected and necessary reports are provided.

9. To feedback the feedback: Once the reports were made and the final report was completed, the feedback is presented to the feedback receivers.

10. To follow up the process execution: The feedback receivers shall have practical plan in the field of removing their weaknesses.

11. To repeat the process: In the organizations that 360 degree feed-

back works effectively, it is possible that the process to be repeated after receiving the initial feedback reports [14].

### **Prevalent Models in 360 degree feedback:**

1. The first model is “job analysis”. This type of appraisal assesses knowledge, skills and abilities based on the procedures for the traditional job analysis.

2. The second model is based on the individual capability. Instead of simple measurement of the skills and abilities, it is concentrated on the appraisal of the capabilities related to the special job.

3. The third model is concentrated on the strategic planning. This type of 360 degree appraisal assesses knowledge, skills and abilities based on the organization’s strategic plans. This is believed that these behaviors or abilities help the organization to achieve to its strategic aims and plans.

4. The fourth model is resulted from development theory that is in close relation with theoretical and conceptual growth and development models by Karraheh. On this basis that 360 degree feedback is resulted in increasing consciousness and in fact to the more effective Karraheh development processes.

5. The fifth model is based on the character theory. This model assesses some skills, knowledge, and abilities which are in relation with the character (such as qualities, characteristics, specifications, communication styles, interpersonal relations and individuals’ recognition) [14].

## **2. Literature Review**

Azar & Sepehrirad have presented mathematical model for 360 degree performance appraisal. They express that developing a comprehensive model is essential that weighs and collects the mental judgments for various appraisal sources. At first they grouped performance appraisal indices in the four groups of individual characteristics, technical skills, human skills, and comprehensive skills, and each one was given a weight,

then a weight was considered for each one of the appraisal sources using phase AHP Technique (views by 3 experts). For determining the final point for the performance of each employee in this research the suggested model by Anders has been used [19].

In this direction, a model for appraising 360 degree performance with the title of heterogeneous information and affiliated criteria has been presented. With expressing that various criteria exist in appraising performance that may have different nature or non-exactness in present, presenting a heterogeneous framework for these criteria has been considered essential. In this field, the criteria are appraised with regard to the rate of appraisers' information from the employees under study. Also an integrated model has been suggested for 360 degree appraising that makes possible an inflexible appraisal framework and the arbitrators can present their appraisals in various fields with regard to non-exactness and nature of the criteria. For getting assurance from effectiveness of the collected information, in this model a set of the factors for controlling the criteria effect and the rate of arbitrators' effect has been created [9].

Also a research has been performed under the title of "Relation between Appraiser's Effect and three Source for 360 Degree Feedback Appraisal" that studies if the appraiser's effect has a similar effect on easy appraisals of the three sources (superior, subordinate and colleague) and also is there any interaction between the appraiser's effect and the time that he spends for observing the appraised individual. The obtained results indicate the influence of appraiser's effect on easiness of superior, and colleague appraisals more than the subordinates' feedback and also it indicates that this effect increases with increasing the observance time [5].

From other performed researches we can refer to a research with the purpose of studying the sexuality effect in managers' performance appraisal with execution of 360 degree appraisal in the International Organization of England Financial Services, in this research, it is expressed that with regard to the essential role of the performance appraisal, from one side it confronts with a great pressure concerning non-influencing the appraisals against illegal discriminatory variables like: age, race and

sexuality. In general, with performed researches there is no considerable deed expressing statistical sexual bias from obtained appraisals results for women managers from the 4 sources: self-appraisal, supervisors' appraisal, subordinates' appraisal, and colleague's appraisal. In fact, after collecting the appraisals results from all of these groups, the final point given to the women managers' performance was considerably higher than their men counterparts. And this is in contrast with the traditional viewpoint of sexual discrimination in which women are prone to negative view based on sexuality [16].

Also a research has been performed in the field of comparing the results of performance appraisal with the traditional method and 360 degree feedback and its relation with satisfaction of the employees at the hospitals in Lorestan University of Medical Sciences, and according to the obtained results, there is considerable difference between the appraisal results with the traditional method and 360 degree feedback. Appraisal with the method of 360 degree feedback had more effect on the employees' satisfaction; also there is significant and reverse difference between traditional appraisal and employees' satisfaction and it means that the existing method has reverse relation with employees' satisfaction and the more this method is used, the fewer employees' satisfaction is created [13].

Another research in this field with studying the effect for agreement or disagreement of student sexuality as appraiser and teacher as the appraised one expresses that with regard to the obtained results from performed researches in Mashhad Ferdowsi University agreement or disagreement of sexuality has no effect on the appraisal of the students from the scientific board members [2].

Nelson expresses that in 1994, 22 companies out of 32 famous companies of Fortune Magazine used 360 degree feedback (down up) in a manner that using 360 degree feedback was public and general almost among company of Fortune Magazine [18].



### 3. Main Body

In the previous sections 360 degree performance appraisal was discussed. In this section with consideration of the importance of 360 degree performance appraisal in the organizations, a model is presented for 360 degree performance appraisal in the deeds digitalizing services companies and then it is analyzed.

As it is observed in figure 2, the presented model is for the deeds digitalizing companies that such companies while participating and admitting in the desiring organ bid, receive the archived deeds of the individuals in that organization and change these documents and deeds from paper to digital, also with designing and presenting software for using the electronic deeds complete the project. In this manner, following sections exist with their related duties for performing the project.

Manager: With participation in the bid and admittance and concluding contract with the related organization, he/ she delivers the related documents and deeds, also presents a design for designing a software of using electronic deeds and approves the software. Also the manager is in charge of the required facilities and employees' salary.

Technical Manager: He/she related the manager with the supervisors of each section, and also monitors the supervisors' work.

Computer director: He/she is in charge of supervising computer employees for creating the related software.

Computer employees: Producing the designed software.

Digital director: He/she is in charge of educating and supervising digital employees, and also encoding for separating the relative deeds for each person.

Digital employees: They are in charge of clarifying the deeds and their digitalization.

Deeds director: He/she is in charge of educating and supervising deeds employees.

Deeds employees: Registration of electronic deeds.

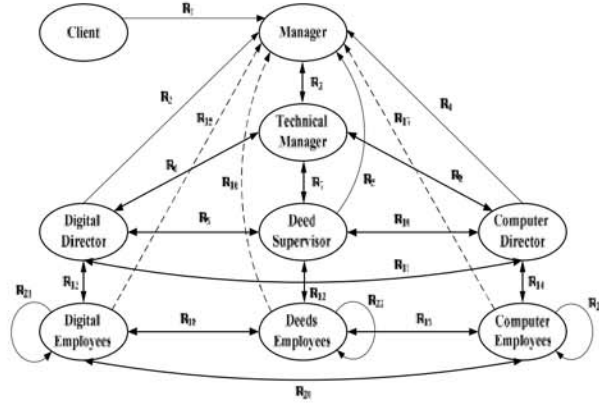


Figure 2. Sources of Performance Appraisal

With regard to the presented model, model elements is relation of each section with other sections and itself that in fact expresses appraised expectations and criteria of each section compared to it and other sections. Thus the elements are in the following for:

Client-manager (R1): Work quality, work speed, availability, and honesty.

Low-high appraisal for the manager: (technical manager-manager (R2)), (deed supervisor-manager (R5)), (Computer director-manager (R4)): Planning, organizing, supervising, and control, decision making, taking responsibility and training.

Employees (Digital, deeds, Computer)-manager (R15, R16, and R17) (Low-high appraisal): Procurement of equipment and facilities, salary provision.

Manager-Manager (self-appraisal): planning, organizing, managing, supervising, and control, decision making, taking responsibility and training, work quality, work speed, availability, honesty, procurement of equipment and facilities, salary provision.

Manager-Technical Manager (R2) (high-Low appraisal): Execution and control of performed plan between the sections, supervision and controlling the supervisors' performance, removing the problems in each

section and reporting to the manager, determining company's needs and reporting to the manager, acceptance of responsibilities and criticism acceptance spirit.

Director (digital, deeds, computer)-Technical manager (R6, R7, and R8) (Low-high appraisal): In time delivery of work for performing and presenting required explanations, availability, and criticism acceptance spirit.

Technical Manager-Digital supervisor (R6) (high-Low appraisal): On time delivery of work, correct training of employees, encoding of deeds, supervision on the employees.

Digital employees-Digital director (R13) (high-Low appraisal): correct justification of employees concerning each one's duties, availability.

Technical Manager-Deed's supervisor (R7) (high-Low appraisal): On time delivery of work, exact supervision on the employees, correct training of employees.

Deeds employees-deeds supervisor (R12) (Low-high appraisal): correct justification of employees concerning each one's duties, availability.

Technical Manager-computer supervisor (R8) (high-Low appraisal): On time delivery of designed software in accordance with the desired design, creation of participation feeling and creation of creativity between the employees, participation with the employees, encouraging the employees for creating new ideas.

Computer employees-Computer supervisor (R14) (Low-high appraisal): complete comprehension of the desired design, participation with the employees, convening sessions for studying work and creation of new ideas, availability.

Digital supervisor-Digital employees (R13) (high-Low appraisal): high exactness and speed, inflexibility spirit in case of creating problem, the spirit of participation in case of need to help in other sections.

Deeds supervisor-deeds employees (R12) (high-Low appraisal): high exactness and speed, inflexibility spirit in case of creating problem, the spirit of participation in case of need to help in other sections.

Computer supervisor-Computer employees (R14) (high-Low appraisal): high exactness, inflexibility spirit in case of creating problem, creation of idea and innovation in designing software for improving software func-

tion.

Appraisal of the colleagues including: computer supervisor-deeds supervisor (R10), Digital supervisor-deeds supervisor (R9), computer supervisor-Digital supervisor (R11), deeds employees with other employees in their section (R22) and other sections (R18, R19), computer employees with other employees in their section (R23)-and other sections (R19, R20), digital employees with other employees in their section (R21) and other sections (R18, R20): Observance of working relations and mutual respect, cooperation and aid spirit.

As it was observed in the manager's self-appraisal, self-appraisal criteria in each section are a set of expected criteria of other sections from the section itself and self-appraisals have not been entitled.

As it was stated, model elements is relation of each section with other sections and the section itself that in fact express relation of each section with itself and other sections. With regard to the duties and responsibilities of each working section, some criteria and specifications are considered for appraisal that non-existence of these criteria is threatening for the organization's working system. For example, the duty for the section of deeds employees is naming the electronically deeds, so exactness and speed in the performance of this section's employees is important that its appraisal is duty of their supervisor, it means the deeds supervisor. For the other sections also the same action is done.

#### 4. Model Analysis

After designing the model, a questionnaire was prepared in Likert Standard for approving and efficiency of the presented model in order to appraise 360 degree performance of deeds digitalizing companies and in this way approval of 40 experts obtained. For determining the questionnaire reliability, the method of Cronbach's alpha was used. If the amount of Cronbach's alpha in the questionnaire to be more than 0.7, that questionnaire has good reliability [11]. Also the software SPSS 20 has been used for statistical analyses.

Cronbach's alpha of this questionnaire is 0.872 and indicates that it has appropriate reliability.

After that, with consideration of the model elements that represent the expectations and criteria for the performance appraisal of each section compared to the other section, one form of performance appraisal has been provided for each one, and with regard to the uniformity of the appraisal criteria for some of the sections compared to the other sections, after collecting and adjusting the forms, finally 17 performance appraisal forms were obtained that the content of each form differed depending on the appraised criteria. These forms are used by the organization's members and clients for performance appraisal.

For example in appraisal of the manager, 3 forms are used. One form for appraisal of the clients from manager, one form for the manager's self-appraisal and the last for is for appraisal of the supervisors and technical manager from manager. In another appraisal of the organization members also the appraisal forms are used in this manner.

The criteria under appraisal which were explained in the previous section are divided in general in the form of Table 1 that this appraisal is performed through the provided forms for the organization.

In each form some questions have been determined for appraisal of each criterion and Likert Scale has been used for replying to each question. With implementing the model and studying the obtained information and results from the performed appraisals, some suggestions were presented for improving the employees' performance which are observed in Table 2.

With regard to the Table 2, remuneration and bonus have been considered for the scores (80-100) that promotion is performed if possible.

Concerning the training for the scores (60-80) and (40-60), at first the appraisal forms are referred to and lowness of the performance is studied that in which one of the appraisal criteria it has had weakness and necessary teachings shall be performed in that field.

And finally for the scores of less than 40, more salary will be reduced compared to the scores of (40-60) and necessary teachings will be performed with studying observed weaknesses, with this difference that the obliged appraised person will be dismissed in case that in the later appraisal after completion of the training course do not obtain admittance mark.

## 5. Conclusion and Suggestions

Performance appraisal plays a key role in the organization that with regard to the obtained information important decisions are made regarding the organization, and each individual can improve and develop his/her job in this manner; while these appraisals are collected from several various sources which are involved with the appraised person that consist of the individual, then the performance appraisal is called 360 degree.

In this paper, 360 degree performance appraisal model has been designed and implemented for the digitalizing services companies that at first for effectiveness of the presented model, a questionnaire was provided in Likert Scale and through which 40 individuals of the experts approved the presented model, and reliability of the questionnaire itself was confirmed by Cronbach's alpha.

Then the model elements were determined and a form was provided for each one with consideration of the appraisal criteria that finally they were summarized in 17 forms for 360 degree performance appraisal that these forms were completed by the organization's members and clients for appraising the organization's members and desired results obtained after deriving information and applying suggestions.

Since execution of each plan and new model in an organization is confronted with some problems and obstacles, execution of this design is not an exception to this rule. Non-awareness of the organization's members causes that they do not wish to attend in the appraisal as the appraised and appraiser individuals. Since attendance in this plan shall be completely voluntarily and each type of compulsion is threatening, for removing this problem, the management shall in some sessions clarifies the purpose of appraisal for the organization's members very well that to what extent does the design has positive effect in the output of the members work and in the whole organization and for attracting reliance of the members it shall be expressed that at first the results for appraisal of each individual will remain secret and only it will be declared to the person himself/herself.

Secondly, in case of any weakness in work their working situation

will not endanger, but they will have another opportunity by training to compensate their weakness. Thirdly, member's views for appraisal are mentioned as unknown.

Form the other side, for encouraging the members to attend voluntarily in the appraisal (particularly the first course), we can consider higher remuneration for the participating members who have received a high mark compared to the next courses and the individuals who have some weaknesses in case of improvement in their performance after the training course will receive remuneration and attendance in the appraisal and cooperation with the organization shall be registered as a positive point in the members' working file.

Table (1): The criteria under appraisal

Criteria	Customer orientation	Organizing	Planning	Leadership	Monitoring and control	Accountability	Salaries and possibilities	Employee training	Contributions	Flexibility	Accuracy	Speed
Manager	✓	✓	✓	✓	✓	✓	✓					
Technical Manager		✓			✓	✓				✓	✓	
supervisors		✓			✓	✓		✓	✓	✓	✓	
employees						✓			✓	✓	✓	✓

Table (2): Scores and Suggestions

Scores	Offers
80-100	Rewards and promotions (if establishing additional requirements)
60-80	training
40-60	deducted from salary and training
Under 40	More deducted from salary, training, and warning expulsion at reassessment after completion of training

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