

Internet Technology and the Assessment of Supervisors: A Unique Perspective for Professional Development and Continuing Education

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Many organizations place upper level managers in the position of guiding the professional development of lower ranking supervisors. Frequently, the upper level manager is responsible for mentoring supervisors and suggesting areas of continuing education that will improve a supervisor's ability to lead a workgroup or manage a team effectively. However, many managers are given the task of providing guidance with little substantive data on the supervisor's actual performance or level of effectiveness in working with subordinates. This raises several critical questions: "What types of interventions are best suited for this supervisor?" "Is there a notable improvement in the supervisor's level of effectiveness following a continuing education program?" "What do the employees think about their supervisor's abilities?" Without good data, these questions are left unanswered or at best muddled in anecdotal obscurity.

When mentoring, a manager must have pertinent information. Contemporary literature in fields of business and of human service organizations reports that an effective supervisor is one who has skills in managing rapid change, empowering the workforce, communicating a clear vision, instilling a sense of purpose, and promoting a culture conducive to continuous learning (Thompson, Menefee, Kryder-Coe, & Marly, 1998; Marisk & Watkins, 1994; Nadler & Shaw, 1994; Schein, 1987). Evaluating these skills should be considered before making decisions regarding professional development options for supervisors. One valuable method of assessing a supervisor's skills is obtaining the perceptions from that supervisor's workgroup. Typically, these employees have frequent interaction with the supervisor and therefore hold a unique perspective as to what they perceive as their supervisor's strengths and weaknesses.

Detailed here is one organization's approach, through the use of Internet technology, to capture employee perceptual data and to use the data toward mentoring the continuing education needs of the organization's supervisors. As the use of

Internet technology in our workplace, schools, and homes continues to grow, the way people and organizations communicate, access information, and purchase goods, change. One positive change for organizations is that the technology can facilitate a critical system of two-way communication between employees and managers. This is a system where employees are empowered to provide feedback in decision-making processes once limited only to upper management. Moreover, the Internet technology makes continuing education an efficient, convenient, and economical tool for organizational improvement.

Background

Every two years, publicly funded agencies in the State of Texas are invited by the State Governor to participate in a unique assessment of their human resources. The assessment instrument is called the Survey of Organizational Excellence and is conducted at the University of Texas at Austin's Center for Social Work Research. The purpose of the assessment is to provide a data source from the perspective of the employee of how well the organization is performing along twenty definable constructs. Examples of constructs include organizational quality, supervisory effectiveness, job satisfaction, employee development, strategic orientation, diversity, and empowerment. The survey results generate a profile of the agency along with benchmark comparisons and over time trend data.

The use of employee perceptual instruments such as the Survey of Organizational Excellence as a valid and important measure of assessment within organizations has several bases in the literature. Lauderdale (1999) indicates that the assessment of employee attitudes has been a routine practice within organizations for over forty years. Moreover, Kraut (1996) contends that perceptual survey research provides an understanding of the effectiveness of quality strategies and human resource concerns, and offers substantive data for the measurement of change.

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Employee perceptual surveys provide a vehicle and a framework from which various perspectives can be examined and measured. Cameron and Whetton (1983) expound, "The advantage of subjective or perceptual data is that a broader set of criteria of effectiveness can be assessed from a wider variety of perspectives" (p. 272). Furthermore, Uehling (1987) suggests that perceptual surveys are advantageous because they allow for the assessment of a broad range of performance indicators, permit employee candor and non-defensive self-assessment, and support strategies for improving effectiveness. The fact that many state agencies in Texas have continuously participated in the Survey of Organizational Excellence over the years is a testimony to the importance that these agencies place on assessing employee perceptions.

This importance of employee perceptions is further exemplified by the actions taken by one prominent state agency. When this agency's Survey of Organizational Excellence data were returned, the construct of supervisory effectiveness received one of the lowest overall scores. The agency has a workforce of over 800 employees with approximately 100 individuals acting as supervisors, and low scores in this area receive considerable attention. Moreover, the agency plays a central role in the physical operations of facilities through providing general services such as procurement, maintenance, and property management for all other state government agencies. Therefore, a lack of effectiveness in this organization potentially impacts the functions of many different agencies.

The low scores on supervisory effectiveness represent general dissatisfaction with how supervisors provide feedback, value opinions, promote teamwork and empowerment, and reward employee performance. Because of this expressed dissatisfaction, the agency's executive leadership decided to act quickly to address the problem. An employee advisory committee comprised of persons representing differing facets of the agency was formed and charged with developing and implementing interventions to improve supervisor effectiveness.

The employee advisory committee reasoned that employee perceptions of supervisor effectiveness would improve if employees were given the opportunity to contribute feedback on their specific supervisor's leadership and management skills, and that this feedback would serve as a guide for upper level management in designing appropriate continuing educational programs for supervisors. In essence, the employee advisory committee wanted to empower employees through involving them in decisions that were typically made without any formal process of employee consultation. The committee's recommendation was to create a system, called the Supervisor's Feedback Report (SFR), whereas employees would contribute insights relating to their supervisor's performance directly to upper level management. The recommendation was viewed with enthusiasm and was seen as a valuable management tool by the agency's executive leadership.

Development of the Supervisor's Feedback Report

The committee's charge was a direct result of the agency's supervisor effectiveness score. Therefore, the committee contacted the Survey of Organizational Excellence office for assistance in developing a suitable instrument, methodology, and procedure. The committee had four general stipulations on how the SFR was to be developed.

1. **External Administrator:** To maintain external integrity and credibility, the employee advisory committee wanted an outside entity to provide expertise for the design and the administration of the SFR.
2. **Easy to Administer:** The SFR process was to be easy to understand and easy to conduct. The SFR was to be made available to each workgroup prior to the respective supervisor's annual performance review. The annual performance review was chosen as the distribution date because the annual review was held at a designated time when upper level management met with supervisors to review the past year and discuss issues relating to professional development.

3. **Rapid Turnaround:** The SFR was to be administered to the approximately 100 individual workgroups throughout the year. The desired turnaround time for the SFR process—from the initial distribution to the return of the data—was five to ten days.
4. **Financially Feasible:** The costs associated with the SFR had to be acceptable to the executive leadership so that implementation was assured.

Technology Throughout the SFR Process

To accommodate the stated stipulations, the Survey of Organizational Excellence staff suggested a process with a strong reliance on automation and information technology. Use of Internet technology is central to the SFR process. Most of the agency's employees have access to a desktop computer with a connection to the world wide web. Therefore, the primary method for collecting and returning the SFR data is via the Internet.

The process begins when employees receive their instructions to complete the SFR. On their instruction sheet is a set of directions and a unique number. The directions ask the employee to open or launch a web browser on any computer with Internet access. Internet Employees are given a URL or uniform resource locator and asked to enter it into the web browser's address or location box. The URL is an address that directs the web browser to contact over the Internet a computer residing at that the requested location. The computer at the URL address is called a server and communicates back to the employee the SFR information. Once contact between the employee's computer and the server is established, the web browser downloads the requested information from the server and displays the information to the employee.

The downloaded file displays questions and spaces for responses. Encoded within the file is a special set of computer programming commands call a web form. A web form is format that allows a person to enter onto the screen any information

requested by the form. In this case, the directions on the computer screen instruct the employee to enter the unique number and to answer the SFR items by clicking the desired responses with the computer mouse. Once the instrument is completed, the employee selects the submit button. This button directs the web browser to transmit the employee's responses back to the server.

As the computer server receives responses from participants, the incoming information is automatically compiled through the use of a server script. Simply stated, a server script is a set of computer coding that executes a prescribed set of commands that are carried out on files or applications residing on the server. In this case, the server script instructs the database application to place the transmitted information directly into database fields. The types of information collected include the unique number, a date, and individual responses for each item.

The unique number serves two purposes. First, the unique number verifies a valid response, and second it serves to identify which supervisor is being evaluated. Next, the current date is captured to assure that the data were collected within the allotted distribution timeframe. Lastly, the responses to each individual item are categorized and stored.

A similar process is available for workgroups who do not have access to a computer at work. For these employees, each is given the option of completing the SFR via the Internet or by using a hard-copy version provided on an OCR form. An OCR or optical character recognition form is a printed sheet that contains the SFR items and a space for responses. Employees using the OCR form must complete the SFR by marking on the sheet their responses and then returning the form through the mail. A computer optically scans OCR forms and data are categorized and stored into the appropriate database fields.

Once the SFR process is completed for an individual supervisor, the data are ready to be returned. The upper level manager of the supervisor receives

an electronic message as to the how to access the results. The manager is provided with a URL address and an access code. The URL address downloads from the server a screen displaying both a greeting to the manager and a form in which the access code can be entered and then submitted to the server. After the submit button is selected, the access code information is transmitted to another file on the server containing a server script. In this script file, the first set of instructions accesses the database in which supervisor and manager information is stored. During this procedure, the access code confirms which manager is retrieving the data. This process assures that only authorized managers are able to view the results of their supervisors. Next, the server script initiates a database query, which retrieves the requested information on that particular supervisor. The query recovers only valid responses and performs summary calculations on the items. The final server script instruction displays on a web page the results of the calculations. Managers can view the results as many times a needed, or they may print a hard copy of the final results.

Many different companies offer computer software and hardware products that can be used to create a process similar to the SFR. Primarily, we used software packages developed by the Microsoft Corporation. The computer server operates using the Windows NT server format. The software application FrontPage 98 was the primary html editor for creating the server script (Active Server Pages), static, and form pages. The database program used was Access. This database has the ability to store both numerical and text values. Furthermore, through the Access query structure, data can be manipulated, calculated, and reported back in formatted tables. Benefits of this Technology and type of Assessment

For managers the benefits in obtaining employee perceptual data on the performance of supervisors are clear. The SFR process furnishes managers with a systematic source of data from which decisions regarding a supervisor's continuing educational

needs may be shaped. Moreover, as supervisors are continuously evaluated, trend data are available showing any overtime decline or increase in perceptual scores from employees, thus providing a track record of supervisory effectiveness.

The SFR also serves as a mechanism for reviewing continuing education programs. These data are a litmus test of sorts in evaluating the effectiveness of continuing educational initiatives by providing information as to whether or not participation in a professional development program varies with employee's perceptions of a supervisor's level of effectiveness. If certain initiatives result in favorable outcomes, management may expand those programs to potentially benefit a greater number of employees. Conversely, the data may also be used to modify or remove interventions deemed ineffective.

The technology additionally provides several benefits in establishing and administering the SFR process. First, once the initial database was configured, web pages designed, and server scripts written, the entire system is almost completely automated. A small amount of maintenance occurs to update supervisor and manager information. The high level of automation keeps the costs affordable and simplifies the administration process. The use of Internet technology enables employees to access the instrument at anytime and from anywhere. Thus technology eliminates the need to complete the instrument during regular office hours or at a specific location. Managers, like employees, also have the same flexibility in accessing the result for supervisors.

Another underlying benefit comes from the participation of employees in the SFR process. An empowering culture emerges when a work environment encourages participation from all members of the organization. A true sense of ownership and trust develops when employees know that their recommendations are both valued and necessary to help shape the organization. When employees are given the opportunity to participate in the processes

similar to the SFR, the increased levels of collaboration and ownership cascade into employee having a greater level of organizational commitment and higher overall levels of satisfaction at work.

Conclusion

Technology as a vehicle for data collection offers many advantages to those in decision-making positions. As the number of employees having access to technology grows, so does the utility and practicality of obtaining meaningful data in areas once thought to be too time-consuming or complex to evaluate. Determining a supervisor's level of effectiveness is one such area, which now is within the scope of many organizations. Such an application of Internet technology provides a provocative alternative to traditional means of assessing and providing continuing education to supervisors. The technology quickly and efficiently identifies the strengths and weaknesses of all supervisors as perceived by the supervisee. Training and consultation then can be focused upon specific supervisors or in some cases helpful material can be linked to a given supervisor score from the web server, itself. Such an approach makes continuing education a genuinely on time and always available resource to any organization.

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