

Chapter 2—Performance Management Process

Learning Objectives

- 2.1 Understand that performance management is an ongoing process including the interrelated components of prerequisites, performance planning, performance execution, performance assessment, performance review, and performance renewal and recontracting.
- 2.2 Conduct a job analysis to determine the job duties, needed knowledge, skills, abilities (KSAs), and working conditions of a particular job.
- 2.3 Write a job description that incorporates the KSAs of the job and information on the organization, unit mission, and strategic goals.
- 2.4 Understand that the poor implementation of any of the performance management process components has a negative impact on the system as a whole.
- 2.5 Understand that a dysfunctional or disrupted link between any of the performance management process components has a negative impact on the system as a whole.
- 2.6 Understand important prerequisites needed before a performance management system is implemented including knowledge of the organization's mission and strategic goals and knowledge of the job in question.
- 2.7 Distinguish results from behaviors and understand the need to consider both in performance management systems.
- 2.8 Describe the employee's role in performance execution, and distinguish areas over which the employee has primary responsibility from areas over which the manager has primary responsibility.
- 2.9 Understand the employee's and the manager's responsibility in the performance assessment phase.
- 2.10 Understand that the appraisal meeting involves the past, the present, and the future.
- 2.11 Understand the similarities between performance planning and performance renewal and recontracting.
- 2.12 Create results- and behavior-oriented performance standards.

Chapter Outline

Overview

1. Prerequisites
 2. Performance Planning
 3. Performance Execution
 4. Performance Assessment
 5. Performance Review
 6. Performance Renewal and Recontracting
1. Prerequisites
 - Knowledge of the organization's mission and strategic goals
 - Knowledge of the job in question

- Knowledge of the mission and strategic goals
 - Strategic planning
 - Purpose or reason for the organization's existence
 - Where the organization is going
 - Organizational goals
 - Strategies for attaining goals

⚡ *Consider the level of strategic integration of the HR function in the Queensland public sector study*

- Cascade effect throughout organization
Organization → Unit → Employee
- Knowledge of the job
 - Job analysis of key components
 - Activities, tasks, products, services, and processes
 - Job description with KSAs required to do the job
 - Knowledge
 - Skills
 - Abilities

⚡ *Give examples of KSAs for a Trailer Truck Driver*

- Conducting the job analysis
 - Can be conducted using a variety of tools
 - Interviews
 - Observation
 - Questionnaires (available on Internet)
 - All incumbents should review information and provide feedback
 - Frequency of tasks
 - Criticality of tasks
 - Biases that affect KSA-related information provided by individuals
 - Self-serving bias
 - Social projection
 - False consensus bias
 - Remedial measure: Web-based rater training program
- Writing the job description
 - Job duties
 - KSAs
 - Working conditions
 - Get generic job descriptions from Occupational Informational Network (O*NET) <http://online.onetcenter.org/>

✎ *How did Deaconess Hospital use information regarding the mission, strategic goals, and individual jobs in its PM system?*

2. Performance Planning

Results

- Key accountabilities
- Specific objectives
- Performance standards

✎ *How are objectives different from performance standards?*

✎ *How might this be demonstrated in a professor's performance plan?*

○ Key Accountabilities

- Broad areas of a job for which the employee is responsible for producing results

○ Specific Objectives

- Statements of outcomes
- Important
- Measurable

○ Performance Standards

- “Yardstick” to evaluate how well employees have achieved each objective

- Information on acceptable and unacceptable performance, such as
 - Quality
 - Quantity
 - Cost
 - Time

Behaviors

- How a job is done

✎ *Why might a salesperson prefer to be measured based on behaviors rather than results?*

Competencies

- Measurable clusters of KSAs
 - Knowledge
 - Skills
 - Abilities
- Critical in determining how results will be achieved

✈ *What kinds of competencies could be measured in an online course?*

Development Plan

- Areas that need improvement
- Goals to be achieved in each area of improvement

3. Performance Execution

The Employee's Responsibilities

- Commitment to goal achievement
- Ongoing requests for feedback and coaching
- Communication with supervisor
- Collecting and sharing performance data
- Preparing for performance reviews

The Manager's Responsibilities

- Observation and documentation
- Updates
- Feedback
- Resources
- Reinforcement

✈ *How does Lockheed Martin emphasize the joint responsibilities of both employees and managers for performance execution?*

4. Performance Assessment

- Manager assessment
- Self-assessment
- Other sources (e.g., peers and customers)

Multiple Assessments Are Necessary

- Increase employee ownership of the process
- Increase commitment to the system
- Provide information to be discussed at the review
- Ensure mutual understanding of expectations

✈ *How does ENSR use the scorecard to meet these goals?*

5. Performance Review

Overview of Appraisal Meeting

- Past
 - Behaviors and results
- Present
 - Compensation to be received as a result
- Future

- New goals and development plans

- ✎ *How is this model different from the results of the survey of 150 organizations in Scotland?*
- ✎ *What kinds of fears and apprehensions might exist, and how might they be handled?*
- ✎ *If we did a survey here, in what ways, if any, would the results differ from the survey of Malaysian teachers?*

Six Steps for Conducting Productive Performance Reviews

- Identify what the employee has done well and has done poorly.
- Solicit feedback.
- Discuss the implications of changing behaviors.
- Explain how skills used in past achievements can help overcome any performance problems.
- Agree on an action plan.
- Set a follow-up meeting and agree on behaviors, actions, and attitudes to be evaluated.

6. Performance Renewal and Recontracting

Same as/Different from Performance Planning

- Uses insights and information from previous phases
 - Includes review of and possible adjustment of goals in accordance with the organization's mission and strategy
 - May require new accountabilities
 - May involve development of new competencies
- Cycle begins again

Performance Management Process: Key Points

- Ongoing process
- Each component is important
 - If one is implemented poorly, the whole system suffers
- Links between components must be clear

Performance Management Process: Summary of Components

1. Prerequisites
2. Performance Planning
3. Performance Execution
4. Performance Assessment
5. Performance Review
6. Performance Renewal and Recontracting

Review Learning Objectives

Worked Solutions for End-of-Chapter Cases

Case Study 2-1: Job Analysis Exercise

1. There are two main reasons for possible disagreements. First, different types of MBA programs have different emphases in the various tasks assigned to MBA students. The disagreement may stem from true differences rather than any cognitive biases. Second, disagreement stems from cognitive biases that affect the accuracy of the information provided by the raters. Such cognitive biases include:
 - a. Self-serving bias (i.e., the tendency for people to report that their own behaviors and personality traits are more needed for successful job performance compared to behaviors and personality traits of others)
 - b. Social projection (i.e., the tendency for people to believe that others behave similarly to themselves and hence lead people to think about only themselves but not others when reporting KSAs for their job)
 - c. False consensus (i.e., the tendency for people to believe that others share the same beliefs and attitudes as themselves)

(Suggested points: 3, [2.2])

2. As one way to reduce disagreement stemming from true differences in emphases, people can create different job descriptions for different types of MBA students. Thus, in the case at hand, the case exercise participants can agree to focus on a particular type (i.e., group) of MBA students rather than MBA students in general. For example, they may distinguish between first year and second year students or between finance majors and marketing majors. As one way to reduce disagreement that stems from cognitive biases, participants can engage in a short (e.g., 15 minutes) Web-based training program designed to mitigate cognitive biases.

(Suggested points: 8, [2.2])

3. The job description provides the criteria that will be used in measuring the performance of employees and rewarding employees. Thus, it is important to consider whether selecting a more results oriented or performance (i.e., behavior) oriented focused job description is more appropriate. So, in the case at hand, how much emphasis should be given to results versus behaviors in the list of tasks described in the job description of an MBA student?

On one hand, a greater portion of the list of tasks described in the job description should be devoted to behaviors rather than outcomes if the following factors are strongly present: 1) Outcomes occur in the distant future (e.g., no law firm assesses the performance of and rewards or disciplines a lawyer until the ruling over a case is made, given that it may take more than several years, even close to a decade, for a case to be completed from the beginning to the final decision, especially if multiple appeals to decisions are made); 2) the link between

behaviors and results is not obvious or difficult to identify (e.g., did the pilot land the plane successfully *because* of actions or *despite* his actions?); and 3) employees have insufficient control over the outcomes of their jobs, but the same employees have great control over how they behave or do their jobs (e.g., the sales figures of a salesperson could be affected more by the assigned sales territory than by the salesperson's ability and performance). Accordingly, a greater portion of the list of task should be devoted to outcomes rather than behaviors if the above factors are weakly present.

On the other hand, a greater portion of the list of tasks described in the job description should be devoted to outcomes rather than behaviors if the following factors are strongly present: 1) Most of the assessed workers are skilled in the needed behaviors (e.g., in assessing the performance of professional basketball players, the free throw shooting percentage is a key results-oriented performance indicator, because most players have the skills to do it well, and it is just a matter of whether hours and hours were devoted to practicing free throw shooting besides actual basketball play); 2) behaviors and results are obviously related (e.g., for a newspaper delivery employee to deliver newspapers to certain customers within a particular time frame, the employee needs to pick up the papers at a specific time and use the most effective delivery route); 3) results show consistent improvement over time (i.e., when results improve consistently over time, it is an indication that workers are aware of the behaviors needed to complete the job successfully); 4) there are many ways to do the job right such that an emphasis on results can encourage employees to achieve the desired outcomes in creative and innovative ways that ultimately benefit the organization; and 5) it is too difficult and costly to measure the desired behaviors rather than outcomes.

(Suggested points: 5, [2.7])

Case Study 2.2: Disrupted Links in the Performance Management Process at Omega, Inc.

1a. prerequisites → performance planning

There is no link between the first two phases of the process. Although the franchise owners laid out all of the prerequisites, they did not use them in performance planning. Although the employees and managers agreed on goals, because the link was broken, these goals did not relate to meeting the organization's goal of customer service. Furthermore, they did not develop job descriptions that described what must be accomplished on the job, including the knowledge, skills, and abilities that are necessary.

1b. performance planning → performance execution

The link between planning and execution exists, as employees and managers both have an understanding of the goals, and feedback is given on how to reach those goals.

1c. performance execution → performance assessment

Currently, there is no link from execution to performance assessment. Employees have no way of assessing themselves on their goal attainment. Furthermore, because the key accountabilities and skills were never identified, the manager has nothing to document but results.

1d. performance assessment → performance review

Because there is currently no formal assessment, this disrupts the link to performance review. Although the manager and employee are meeting to discuss progress, they do not have a form to follow.

1e. performance review → performance renewal and recontracting

Because, currently, the performance review is not a formal meeting where there is a specific form to follow or goals to discuss, it is hard to identify where performance is breaking down and where it is good. Thus, there can be no renewal or recontracting.

1f. performance renewal and recontracting → prerequisites

Because there is no renewal or recontracting, it cannot be linked to prerequisites.

(Suggested points: 5, .5[2.4], .5[2.5])

2. Given your answers to question 1, what can be done to fix each of the disrupted links in the process?

2a. prerequisites → performance planning

The franchise owners can strengthen the link between prerequisites and performance planning by developing job descriptions and an appraisal form that lists all of the things that the employees are accountable for, explaining how performance will be judged. Furthermore, the organization's mission of quality customer service needs to be communicated in the goals that are set and in the performance evaluated.

2b. performance planning → performance execution

This link currently exists; it will be even stronger when employees have a better idea of the performance they must provide in order to receive high performance ratings.

2c. performance execution → performance assessment

Employees need to be given regular updates on how many sales they have, any customer feedback that has been received, and feedback from their managers on how well they are performing the necessary tasks.

2d. performance assessment → performance review

The creation of a standardized appraisal form will improve the review phase and its link with the assessment phase.

2e. performance review → performance renewal and recontracting

The manager and employee need to set a formal meeting time for performance review where there are written goals and a standardized appraisal form. At this meeting, they should reassess the goals set, brainstorm ideas where performance can be improved, check with Omega to ensure their needs are being met, and then begin the process again.

2f. performance renewal and recontracting → prerequisites

If Omega's needs are being met, and the organizational goals remain unchanged, then the prerequisites are in place to begin the process again. If the needs are not being met, organizational goals and individual job descriptions need to be changed to meet the newly defined needs.

(Suggested points: 5, .5[2.1], .5[2.6])

Case Study 2.3: Performance Management at the University of Ghana

(Note: This response is provided for a potential grader and thus attempts to identify EVERY flaw and possible resolutions. In question 1, the student is only asked to identify ONE flaw. The responses include a discussion of how poor implementation of the component has a negative impact on the flow of the process as a whole—a discussion which is requested in question 2.)

1. and 2. An important flaw of the Balme library performance management system is that the prerequisites were not taken care of before the process was implemented. There is no mention of the mission of the library. Furthermore, there is no mention of each individual department and how each contributes to the library's mission. Second, there is no documentation on the key components of each job. Employees do not know what tasks need to be done or how they should be completed. The employees also do not know what KSAs are needed. Without this information, managers cannot establish criteria for job success.

Thus, because the groundwork of the performance management process was not laid before the system was implemented, the rest of the system is likely to fail. Performance planning cannot be accomplished without the prerequisites. Without knowledge of the library's goals, the manager cannot explain to each employee how his/her input leads to the accomplishment of those goals. Furthermore, in the absence of a job analysis and a resulting job description, managers cannot discuss with their employees what they were responsible for or how they should perform their work. Finally, performance standards cannot be set if accountabilities are not specified, and development plans cannot be written without performance standards.

Without prerequisites and planning, performance execution will not be successful. Employees and supervisors cannot agree on or engage in dialogue surrounding performance expectations that were never set. Similarly, without execution, performance assessment is impossible. Neither managers nor employees can evaluate performance, because neither party knows what it takes to do the job, what dimensions the employees should be measured on, and what goals the employees were supposed to reach.

Performance review is meaningless unless there is a performance evaluation or appraisal form to discuss. Finally, employees and managers cannot renew and recontract performance because they were not engaging in the process to begin with, so they do not know what was effective and what needs to be adjusted.

For question 1: **(Suggested points: 3, [2.1])**

For question 2: **(Suggested points: 5, .5[2.4], .5[2.5])**

3. (Note: The student was asked to identify one problem. This response addresses all of the problems identified in the responses to questions 1 and 2 above. It is only necessary for the student to recommend solutions to the specific problem identified.)

To correct these problems, Balme library must first set organizational goals. Next, a job description is needed for each job in the organization. Then, the library needs to communicate to each employee how his or her job responsibilities tie into the organizational goals (prerequisites). Next, managers need to explain to the employee his or her key accountabilities, then set specific objectives for each accountability. Also, performance standards need to be determined. Finally, the manager and employee need to write a developmental plan that includes a description of areas that need improving and goals to be achieved in each area (planning).

Next, there is a need to create employee commitment toward achieving the goals and toward proactively seeking feedback from his or her supervisor. The supervisor must observe and document the employee's performance, update the employee on any changes in the goals of the library, and provide resources and reinforcement to the employee so the employee is motivated and successful in meeting his or her goals (execution).

Both the employee and the supervisor must evaluate employee performance (evaluation). Next, the employee and the manager must meet to discuss employee performance, what the employee has done effectively and ineffectively, and what changes need to be made to improve performance (review).

During the final component of the PM process, employees and managers use information gathered during the review period to make adjustments to the goals set, and both commit to their roles in meeting these goals. Executing these steps in the order described will help the Balme library staff get their performance management system on track.

(Suggested points: 5, [2.1])

Additional Cases and Worked Solutions

Case Study: Front Range Medical Associates (FRMA)

Front Range Medical Associates (FRMA) is a small medical practice owned by four doctors who are general practitioners. The mission of FRMA is to provide the best health care and medical assistance for the families of Granite, a mid-size city at the base of the Rocky Mountains. FRMA employs three clerical employees, four nurses, two physicians' assistants, two laboratory technicians, and a custodian. Because this company is in the United States, one clerical employee spends most of his time identifying what insurance coverage is available to the various patients and negotiating costs with the various insurance companies. Although the company has employed some of the employees since 1974, it has relied on generic job descriptions and the institutional memory of Lenore, the head clerk, and Roseanne, the head nurse. However, Roseanne retired last summer and Lenore is planning to retire in a year. The nurses now report directly to the doctors, who also oversee the physicians' assistants. The doctors have noticed that the previously well-run underpinnings of their practice have developed some glitches. They have hired you to help them get things running smoothly again.

1. Dr. Beasley, the senior member of the practice, tells you that he has heard that a performance management system might be a good idea. He asks you to explain the key features of such a system to him. Please provide him with a detailed discussion.

(Suggested points: 2, [2.1])

2. One of the problems at FRMA is that job duties are unclear. Discuss the information you would need to help FRMA resolve this problem, and explain how you would get this information.

(Suggested points: 10, .5[2.2], .5[2.6])

3. The following is part of a generic job description for registered nurses obtained from O*NET.

29-1111.00 - Registered Nurses: Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required.

Expand this generic job description in the context of FRMA's mission.

(Suggested points: 10, [2.3])

4. You are advising Dr. Beasley about developing a performance plan for the employees in the practice. What factors should he consider in developing this plan?

(Suggested points: 5, [2.7])

5. Explain the responsibilities of the supervisor and the employees during the performance execution and review phases.

(Suggested points: 5, .5[2.8], .5[2.9])

Answers:

1. (Note: The following is taken directly from the summary in the text. It is important to use correct vocabulary in describing the concepts.)

“Performance management is an ongoing process. It never ends. Once established in an organization, it becomes part of an organization’s culture. The performance management process includes six closely related components: (1) prerequisites, (2) performance planning, (3) performance execution, (4) performance assessment, (5) performance review, and (6) performance renewal and recontracting.”

2. Part of the problem is that FRMA needs a more detailed mission. The mission statement explains the reason for FRMA’s existence: to provide the best health care and medical assistance for the families of Granite. However, it does not say anything about FRMA’s goals or strategies; there is no cascade effect throughout the organization. Thus, I would need to work with the doctors and staff to develop a more detailed mission statement.

Then, we need to do a job analysis for each job in order to develop up-to-date job descriptions. We can begin with generic job descriptions from the Occupational Informational Network (O*NET at <http://online.onetcenter.org/>) and then interview the doctors, any supervisors, and the employees to determine the accuracy of the job descriptions. It is important to list job duties, KSAs (knowledge, skills, and abilities required to do the job), and working conditions. The incumbents should also review the information developed and provide feedback regarding the frequency and criticality of the tasks they do.

3. This is a sample expansion: Assess patient health problems and needs, develop and implement excellent nursing care plans, and maintain medical records for the families of Granite. Administer excellent nursing care to ill, injured, convalescent, or disabled patients. May advise patients on superior health maintenance and disease prevention or provide case management for the families of Granite. Licensing or registration required.
4. Performance planning includes the consideration of results and behavior as well as a developmental plan. A discussion of results needs to include key accountabilities (i.e., broad areas for which an employee is responsible), specific objectives for each key accountability (i.e., goals to be reached), and performance standards (i.e., what are acceptable and unacceptable levels of performance). A

discussion of behaviors needs to include competencies (i.e., clusters of KSAs). Finally, the developmental plan includes a description of areas that need improving and goals to be achieved in each area.

5. During the performance execution phase, management is responsible for observation and documentation; updating employees; providing feedback to employees; providing employees with the resources they need to do their jobs; and providing reinforcement to the employees. Employees are responsible for doing their jobs, with a commitment to achieving the goals developed during the performance planning process. They should make ongoing requests for feedback and coaching and communicate regularly with their supervisors. They should collect and share performance data with their supervisors. They should also prepare for their performance reviews.

During the performance review phase, the supervisor should review past behaviors and results, discuss any rewards that will be provided in the present, and work with the employee to set new goals and development plans. The employee is responsible for having completed a self-assessment prior to the performance review meeting. In addition, the employee should plan on participating actively in the discussion of his or her performance and help with development of the new action plan.

Case Study: KS Cleaners (KSC)

KS Cleaners is a small company that provides several services to its customers: dry cleaning of clothes, laundry, ironing, and some clothing repair work. KSC specializes in low-cost volume, promising that dry cleaning will be returned to its customers the day after it is turned in. The charge is \$1.50 for each item dry-cleaned; there is an extra charge for ironing, although ironing is usually not necessary because the items are placed on clothes hangers immediately after they are removed from the dryers. Laundry is \$1.00 per item, with an extra charge for ironing if desired. Clothing repair, such as hemming, replacement of buttons and zippers, and so on, is charged by the hour.

In addition to Kevin, the owner and manager, there are eight employees: two dry cleaners, a seamstress, and five general duty employees, who rotate where they are needed among front counter customer service and sorting clothes, loading the machines, removing clothes from machines, folding or hanging up the items, and preparing them for pickup. Kevin has found that he can hire teenagers for the general duty positions, because these duties don't require much training. The company needs employees who are focused on customer satisfaction and quick turnaround; when there are slow times, however, these high school students often work on homework or socialize, which is acceptable behavior as long as the work gets done and the customers are happy.

Pay ranges from minimum wage for the general duty employees to \$15 per hour for the dry cleaners. The seamstress is paid on a negotiated piecework basis, depending on the complexity of the task.

This shop has been doing so well that Kevin is thinking about opening another shop. He has done some research and realizes that he will need to formalize procedures that, heretofore, he has run almost by instinct. A new manager will need to operate the new shop in a fashion that is identical to the successful way he has run his current shop. Although he dreads the process, he recognizes that it is time to document procedures and to formalize job descriptions. He has hired you to help him to develop a formal performance management process.

1. In the context of KS Cleaners, critically evaluate the availability of any prerequisites to implementing a performance management process.
(Suggested points: 10, [2.6])
2. Discuss your plans for developing formal job descriptions for the employees at the second shop.
(Suggested points: 10, .7[2.2], .3[2.3])
3. Explain key features of developing performance plans for the employees. Provide examples of factors you would consider in developing such plans for the dry cleaner.
(Suggested points: 10, [2.7])
4. In the context of KSC, create two results-oriented performance standards for the general duty employees.
(Suggested points: 10, [2.12])
5. The following information was obtained from O*NET.
41-2021.00 - Counter and Rental Clerks:
Knowledge: Customer and Personal Service—Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Skill: Speaking—Talking to others to convey information effectively.
Ability: Oral Comprehension—The ability to listen to and understand information and ideas presented through spoken words and sentences.
Work Activities requiring the above competencies: Working Directly with the Public—Dealing directly with the public.

Discuss the factors that should be considered in establishing behavior-oriented performance standards for the general duty employees. Give an example of such a standard.

(Suggested points: 10, [2.12])

6. Provide a detailed discussion of both the responsibilities of the manager and the responsibilities of the general duty employees during the performance execution phase.

(Suggested points: 2, [2.8])

7. Explain the process that Kevin should use to get information when he is developing the performance assessments for the general duty employees.

(Suggested points: 10, [2.9])

Answers:

1. The prerequisites to implementing a performance management process are knowledge of the organization's mission and knowledge of the job(s) in question. Neither of the prerequisites is in place officially; however, there is some information in the description that could be used to begin to develop these prerequisites.

For example, the mission will probably include some of the following information, because this is what the company is about:

- a. KSC specializes in low-cost volume, promising that dry cleaning will be returned to its customers the day after it is turned in
- b. Customer satisfaction
- c. Quick turnaround

There is some information about the jobs involved, but more will be needed before a performance management process can be implemented.

2. Each job requires a job analysis (dry cleaner, seamstress, general duty employee, and manager). Note: Kevin is currently the manager of this shop, but, because he intends to open a new shop, he will need to define those duties and hire a manager for one of the shops; the manager will be reporting to Kevin.

The job analysis will include a description of job duties, required knowledge, skills, and abilities (KSAs), and working conditions. I would collect data from current incumbents and their supervisor (Kevin), both by interviewing and observing them.

I would check the information I gained against the information that is online at the Occupational Informational Network (O*NET at http://online.onetcenter.org/gen_search_page) to see if I've left out anything important or if I need to get more information. (Note: It is not necessary to know the URL. It is provided because some people are more likely to remember the URL than the name of the network ... either response is fine.)

When I have this information, it will be important to incorporate the company and unit missions, when they have been developed.

3. Performance planning includes the consideration of results and behaviors as well as a developmental plan for each individual employee. Note that results and behaviors must be within the employee's control.

A discussion of results needs to include key accountabilities (i.e., broad areas for which the employee is responsible), specific objectives for each key accountability (i.e., goals to be reached), and performance standards (i.e., what are acceptable and unacceptable levels of performance).

A discussion of behaviors needs to include competencies (i.e., clusters of KSAs—knowledge, skills, and abilities).

Finally, the developmental plan includes a description of areas that need improving and goals to be achieved in each area.

For example, in terms of results, the dry cleaner is responsible for (accountability) ensuring that clothes are spotted and cleaned promptly. Perhaps a specific objective would be that all incoming clothes should be cleaned before the end of the day and an acceptable performance standard would be that 10 loads per day are cleaned and no more than two items per day need to be re-cleaned.

The dry cleaner might be responsible for displaying competency in some of the following: knowledge of chemicals necessary to use for cleaning specific fabrics; skill in determining causes of stains and deciding what cleaning methods to use; and ability to communicate with general duty employees to keep them productive.

4. (Note: Evaluate responses based on how clearly the standards are defined. Do they consider quality, time, cost, or quantity? Is the standard within the employee's control? Have they provided information on what it takes to meet the standard? How will we know if the standard has not been met?)

Sample response:

Hanging clothes: Performance is acceptable if the employee, on average, removes and hangs up at least 60 items of clothing per hour. No more than one item every two hours should have wrinkles from being left in the dryer too long or from being incorrectly hung. The quantity standard has not been met if the employee, on average, removes and hangs less than 60 items of clothing per hour. If more than four items per day have wrinkles from being incorrectly hung or being left in the dryer too long, the employee has not met this standard for quality.

5. (Note: Evaluate responses based on how clearly the standards are defined. Are the standards within the employee's control? Have they provided information on what behaviors and competencies are required to meet the standard? How will we know if the standard has not been met?)

Sample response:

Working directly with the public: It is important to consider the behaviors that will be necessary for the employee to meet the goal of “customer satisfaction.” The KSAs described above are necessary for the employee to work at the counter, dealing with customers. It is important to describe behaviors and competencies that are within the employee’s control. Thus, the employee should be competent in talking to the customer and determining what services the customer needs. The employee should be able to listen to the customer and understand information the customer provides. The employee should be able to determine if the customer is having trouble and look for ways to help him or her receive satisfactory service. For example, one competency-related performance standard might be a requirement for good manners in dealing with strangers.

6. The manager is responsible for observing and documenting the general duty employees’ performance, providing updates and resources to do the job, giving feedback, and reinforcing positive behavior.

In addition to a commitment to actually doing the job and achieving planned goals, the general duty employees have an ongoing responsibility to ask their manager for feedback and coaching. They need to communicate with the manager, collect and share performance data regarding how they are doing, and prepare for the performance reviews.

7. In addition to using his own observation and documentation, Kevin should ask the general duty employees to assess their own performance and to assess their fellow employees’ performance. He should also use feedback he has received from the dry cleaner, the seamstress, and the customers regarding each employee’s performance. When they know that their assessments are based on multiple sources of feedback, employees feel that they have more ownership of the process and become more committed to the performance management system. The feedback that Kevin gathers will provide information that can be discussed at the review meeting; it will help Kevin and the individual employees to have a mutual understanding of expectations.

Case Study: Focusing on Only One Component of a Performance Management System¹

Omega, Inc. is a small manufacturing company whose sales success or failure rests in the hands of sales representatives employed by franchised dealers operating independently. Omega faces a challenging situation because it does not have control over the people working for the independent dealerships. Until recently, there was no clear understanding of the role and responsibilities of the sales representatives, and there were no formal sales processes in place. Sales representatives varied greatly in terms of their levels of skills

¹ This case study is loosely based on the following case study: Swinney, J., and Couch, B. (2003) Sales Performance Improvement Getting Results Through a Franchise Sales Organization. *International Society for Performance Improvement Case Studies*. Retrieved March 3, 2011 from ISPI Online at: <http://www.ispi.org/archives/gotResults.htm#selection>

and knowledge; most put out little effort beyond taking orders, and they did not feel motivated to make additional sales. Finally, franchises varied greatly regarding their management strategies and follow-up with Omega.

Recently, understanding the need to improve the performance of sales representatives, Omega, Inc. agreed to partially fund and support a training program for them. The network of franchise owners in turn agreed to work together to implement a performance management system. As a first step in creating the performance management system, the franchise owners conducted a job analysis of the role of the sale representatives, wrote a job description, and distributed it to all sales representatives. The franchise owners also adopted a franchise-wide mission statement based primarily on the need to provide high-quality customer service. This mission statement was posted in all franchise offices, and each franchise owner spoke with his/her employees about the contribution made by individual sales on achieving their mission. As a second step, the managers set performance goals (i.e., sales quotas) for each employee. Then, all sales representatives attended extensive training sessions. The employees received feedback based on their performance in the training course and then were reminded once again of their sales quotas.

Back on the job, managers gave feedback to their employees regarding their standing in relation to their sales quotas. Because the employees had no way of monitoring their own progress toward their quotas, the performance feedback consisted of little more than a reiteration of monthly sales goals. There was no performance appraisal form in place, so discussions were not documented. This lack of feedback continued and, although sales quotas were being met for the first few months, franchise owners received complaints from customers about the low quality of customer service they were receiving. Subsequently, sales began to decline. Furthermore, many orders were often incorrect, forcing customers to return items to Omega.

Although the new performance management process was an improvement over no performance management (at least initially), the franchise owners were still far from having a system that included a smooth transition between each of the components of the performance management process.

Based on the above description, please answer the following questions.

1. Discuss whether and in what form each of the following links (also shown in Figure 2.1) is present in Omega's performance management system:
 - a. prerequisites → performance planning
 - b. performance planning → performance execution
 - c. performance execution → performance assessment
 - d. performance assessment → performance review
 - e. performance review → performance renewal and recontracting
 - f. performance renewal and recontracting → prerequisites

(Suggested points: 5, .5[2.4], .5[2.5])

2. Please choose one link in the performance management process at Omega that has not been created effectively (there are several; choose only one). What should be done to improve the link that you have chosen?

(Suggested points: 5, .5[2.4], .5[2.5])

Answers:

1a. prerequisites → performance planning

There is no link between the first two phases of the process. Although the franchise owners laid out all of the prerequisites, they did not use them in performance planning. Although the employees and managers agreed on goals, because the link was broken, these goals did not relate to meeting the organization's goal of customer service. Furthermore, they did not develop job descriptions that described what must be accomplished on the job, including the knowledge, skills, and abilities that are necessary.

1b. performance planning → performance execution

The link between planning and execution exists, as employees and managers both have an understanding of the goals and feedback that are given on how to reach those goals.

1c. performance execution → performance assessment

Currently, there is no link from execution to performance assessment. Employees have no way of assessing themselves on their goal attainment. Furthermore, because the key accountabilities and skills were never identified, the manager has nothing to document but results.

1d. performance assessment → performance review

Because there is currently no formal assessment, this disrupts the link to performance review. Although the manager and employee are meeting to discuss progress, they do not have a form to follow.

1e. performance review → performance renewal and recontracting

Because, currently, the performance review is not a formal meeting where there is a specific form to follow or goals to discuss, it is hard to identify where performance is breaking down and where it is good. Thus, there can be no renewal or recontracting.

1f. performance renewal and recontracting → prerequisites

Because there is no renewal or recontracting, it cannot be linked to prerequisites.

2a. prerequisites → performance planning

The franchise owners can strengthen the link between prerequisites and performance planning by developing job descriptions and an appraisal form that lists all of the things that the employees are accountable for, explaining how performance will be judged. Furthermore, the organization's mission of quality customer service needs to be communicated in the goals that are set and in the performance evaluated.

2b. performance planning → performance execution

This link currently exists; it will be even stronger when employees have a better idea of the performance they must provide in order to receive high performance ratings.

2c. performance execution → performance assessment

Employees need to be given regular updates on how many sales they have, any customer feedback that has been received, and feedback from their managers on how well they are performing the necessary tasks.

2d. performance assessment → performance review

The creation of a standardized appraisal form will improve the review phase and its link with the assessment phase.

2e. performance review → performance renewal and recontracting

The manager and employee need to set a formal meeting time for performance review where there are written goals and a standardized appraisal form. At this meeting, they should reassess the goals set, brainstorm ideas where performance can be improved, check with Omega to ensure their needs are being met, and then begin the process again.

2f. performance renewal and recontracting → prerequisites

If Omega's needs are being met, and the organizational goals remain unchanged, then the prerequisites are in place to begin the process again. If the needs are not being met, organizational goals and individual job descriptions need to be changed to meet the newly defined needs.

Case Study: The Worst Possible Performance Management System

Founded in 1990 in Englewood, CO, the A-Team Company now faces numerous resource challenges in a highly competitive global environment. In particular, the CEO of the A-Team Company realizes that the firm lacks the necessary human resource capacity to serve an increasingly internationally diverse and demanding customer base. Thus, the CEO wants Parker, the head of the HR department, to take the strategic role of implementing an effective performance management system; the firm currently has a performance *appraisal* system. Parker is thrilled and eager to use this opportunity to

prove to his colleagues that HR is indeed of strategic importance rather than being the firm's bureaucrats or police.

But the CEO wants some accountability from Parker who will thus not be given a blank check to do whatever he wants to do right away. The CEO comes up with a creative way of achieving greater accountability. Before any steps are made to implement Parker's plan, a third party HR consultant who has little to no emotional ties to the concept of performance management, and certainly none to Parker, is hired and assigned the task of describing the worst possible performance management system. The CEO will then ask how Parker plans to make sure that the performance management system at the A-Team Company will not become anything close to the worst possible performance management system. Also, the CEO intends to assess the future performance of Parker partly based on the similarity or dissimilarity between the actual performance management system implemented and the worst possible performance management system that the consultant will have described.

You are the consultant that the CEO has hired. What would the worst possible performance management system look like? What effects would it have on the individual, group, or organization? In short, describe a scenario. Be specific.

(Suggested points: 10, .5[2.4], .5[2.5])

Instructions:

In describing your worst possible performance management system, keep in mind that the performance management process largely consists of six components: 1) Prerequisites; 2) performance planning; 3) performance execution; 4) performance assessment; 5) performance review; and 6) performance renewal and recontracting.

Also, be careful not to create a performance appraisal system and then argue that your system is the worst possible performance *management* system. See Chapter 1 and Case 1-1 to learn how to more carefully distinguish between performance appraisal and performance management. If your instructor did not assign or go through Case 1-1 in class, make sure to ask him or her for a copy or lecture on the answer to Case 1-1.

Finally, do not simply copy or paraphrase vague, general principles from the book. Rather, describe specific characteristics of your worst possible performance management system and provide concrete examples. Please use the following "worst possible performance management system" as an example of how specific your scenario should be:

"... the performance management system does *try* to tie the organization's mission, vision, and strategic goals all the way down to job descriptions and individual's goals. However, during the implementation process, the HR team that was assigned the task of implementing the performance management system did a poor job in making unit-level managers and employees accept individual level goals that are more congruent with the organization's goals. For example, John Stubborn, a 20-year employee with the

Troubled Company, continued to use the old job descriptions and existing goals for individual employees. Also, even though John was asked to expand and rate the outcomes-oriented tasks more heavily than behavior-oriented ones, John refused and continued to consider more heavily the behavior-oriented tasks, because he believed that the outcomes-orientation was ‘inhumane.’ Such resistance from lower level managers and employees to fully accept the company’s effort to tie the organization’s strategic goals and orientation to those of individual employees continues to make the performance management system ineffective. To make matters worse, in some work units, the firm’s strategy has been communicated and understood inaccurately, even though those work units were eager to follow the firm’s strategy more closely. As a result, those highly responsive and cooperative employees (who also happen to be some of the best employees that the company has) are being directed to do things that are often directly contrary to the firm’s strategy ...

... but the emphasis on making performance management an ongoing process as part of the performance management system seems to have been over- or wrongly emphasized. Managers and their employees have been given so much paperwork and been forced to engage in so many formal meetings throughout the year that many of them are finding it difficult to get their assigned operational tasks completed on time. To make matters worse, because many of the managers vying for promotion opportunities are strongly aware of the fact that the performance management system initiative has the backing of the CEO and other powerful members of the firm’s top management, those managers are afraid to voice their concerns and complaints ...

... the lack of training on coaching and employee development is also causing the implemented system to harm the company ... coaches too often direct their seemingly well-intentioned comments in terms of the employees themselves rather than the employees’ specific behaviors. These kinds of comments are misdirected in that they often cause employees to simply get discouraged and angry, because there is little that a person can do to change *him- or herself* rather than his or her *actions* ...

... yet goals are not set right. They are often too vague or too ambitious. For example, one of the managers believed that ‘do your best by the end of year’ was an effective goal he had set for his employees ...

... The forms that the employees are rated on contain vague items such as ‘general behavior.’ The forms include no specific definition of what ‘general behavior’ is or examples explaining to employees (or managers) what would lead to a high or a low rating in this category ...

... Overall, because the performance management system at hand has been so poorly designed and implemented, it is strongly believed that the current performance management system is causing more harm than the previous, narrower performance appraisal system used to ...”

Hint: If you are having a hard time coming up with ideas for your worst case scenario, consider getting together with several classmates or at least others who have some knowledge in HR to brainstorm ideas.

Answers:

Due to the general nature of the question asked in the case, students will most likely come up with all kinds of different, specific scenarios. Thus, there is no one right answer to this exercise. Nonetheless, the instructor may look for the presence and strength of the following factors in students' scenarios:

- 1) Was the description of the worst possible performance management system specific—even more specific than the sample provided in the instructions for the case exercise? Were many examples supplied?
- 2) Did the student make sure to clearly distinguish between performance appraisal and performance management such that (s)he did not end up describing a worst possible performance *appraisal* system?
- 3) Did the student describe how things can go badly in all six components of the performance management system? Recall that the six components are 1) prerequisites; 2) performance planning; 3) performance execution; 4) performance assessment; 5) performance review; and 6) performance renewal and recontracting.

Of course, the instructor may choose to grade the students' scenarios based on additional criteria such as clear writing, creativity, and theoretical soundness. The above three factors are just recommendations.

Case Study: Performance Management System in the Classroom²

Morgan is a performance management system expert. She is used to doing consulting work (i.e., helping leaders implement performance management systems in their organizations) for companies and governmental agencies. This time, she has been asked to do consulting work for a rather unusual client, a university professor who teaches large introductory business courses. How might Morgan go about designing a performance management system for a university classroom environment where students are likened to employees?

(Suggested points: 15, .4[2.1], .3[2.6], .3[2.7])

Instructions:

In designing the system, make sure that the following components of a performance management system are included and discussed in your design:

- Prerequisites
 - Knowledge of the organization's mission and strategic goals
 - Knowledge of the job in question
 - Linkage between the organization's goals and individual job descriptions

² This case was based loosely on Gillespie, T. L., and Parry, R. O. (2009). Students as Employees. *Journal of Management Education*, 33, 553-576.

- Performance planning/goal-setting
 - Results, behaviors, and development plan
- Performance execution
 - Commitment to achieving set goals
 - Ongoing performance feedback and coaching from supervisor to subordinate
 - Communication from subordinate to supervisor
 - Collecting and sharing performance data
 - Preparing for performance reviews
- Performance assessment
 - Self-appraisal and appraisal from supervisor
- Performance review
 - How many times during the semester?
 - Discussion of any disagreement between self-appraisal and appraisal from supervisor
 - Feedback on both positive and negative aspects of subordinate's performance
 - Overall rating/discussion of rewards to be received and rewards to be denied
- Performance renewal and recontracting
 - Performance planning/goal-setting
- Additional considerations

Answers:

There is no one right answer to this exercise. Nevertheless, the grader might take into account the following sample answers.

- Prerequisites
 - Knowledge of the organization's strategic goals: If the student's department or college has established quality goals for each major, it is important to have each student, depending on his or her major, identify such quality goals as his or her "strategic goals." In the alternative, if the student has more specific career aspirations (e.g., become a successful marketing manager at a mid-size company), then a generic job description (perhaps obtained through O*NET) can be treated as his or her strategic goals. A student's strategic goals, once identified, need not be recreated from scratch for every course taken in the future. Instead, the student can use the exact same set of strategic goals for every class until the time comes to make adjustments/updates to his or her strategic goals.
 - Knowledge of the job in question: Each student brainstorms all tasks and KSAs required by the student "job." In doing so, the student must make the judgment of how much emphasis will be put on behaviors and results

in the list of tasks. The student then rates his or her list of tasks; list of knowledge; list of skills; and list of skills in terms of frequency and criticality. Then, the lists' elements are reordered according to the rating results. As a result, the student will have completed a thorough and accurate student job description. This process of creating a student job description is repeated for every sufficiently distinct class the student takes. Treatment of each sufficiently distinct class as a distinct job is necessary, because sufficiently different classes have different sets of work (or tasks) and thus different sets of KSAs.

- Linkage between the organization's goals and individual job descriptions: The student considers both his or her strategic goals and his student job description. More specifically, any necessary adjustments are made to the student job description by taking into account (i.e., seeking alignment with) the strategic goals.
- Performance planning/goal-setting
 - Results, behaviors, and development plan: Setting goals with an emphasis on results is not recommended in the educational environment, because doing so is likely to cause excessive anxiety, narrowed mindset, excessive competition with classmates, or grade inflation. Setting goals with an emphasis on behaviors is also not recommended in the classroom setting, because doing so may cause students to develop more interest in narrower, more extrinsic outcomes such as earning higher grades. On the other hand, setting goals with an emphasis on long-term development goals (i.e., mastery goals) is more likely to make students interested in the more intrinsic rewards of learning to gain the skills needed for success in the major or future job. Thus, with his or her student job description for a course, the instructor and the student work to set specific, challenging, and developmental goals to be achieved throughout the semester. In turn, with regard to grading, the student performance management system that is advocated here strongly focuses on each student's distinct development goals that are not graded. The actual grading will be based on a uniform behaviors- and outcomes-oriented set of criteria to maintain the perception of fairness.
- Performance execution
 - Commitment to achieving set goals: One way to enhance commitment is to allow the employee (or student) to be an active participant in the process of setting goals during the performance planning/goal-setting stage of the performance management process. Because the student performance management system that is advocated here strongly focuses on each student's distinct development goals that are not graded (the actual grading will be based on a uniform behaviors- and outcomes-

oriented set of criteria), the active participation of each student in his or her goals should not be problematic.

- Ongoing performance feedback and coaching from supervisor and peers to subordinate: Students can be encouraged or required to 1) keep ratings on how well their developmental goals are being met; 2) share those performance logs with one another; and 3) provide feedback to one another based on the performance logs.
- Communication from subordinate to supervisor: Students are encouraged to meet with their advisors when needed.
- Collecting and sharing performance data: Encourage students to write down verbal feedback and save written feedback for their own good (i.e., fulfillment of strategic goals).
- Preparing for performance reviews: The feedback that the student has been collecting should be reviewed by the student before any performance assessment or review is conducted.
- Performance assessment
 - Self-appraisal and appraisal from supervisor: Before the performance review takes place, it is ideal that the students are given the chance to rate themselves. Why? Self-appraisals can reduce the student's defensiveness during the next performance review meeting and increase the employee's satisfaction with the performance management system as well as enhance perceptions of accuracy and fairness and therefore acceptance of the system.
- Performance review meeting
 - How many times during the semester? The meeting can occur only once during the semester. Or, the instructor and the student can meet twice during the semester, such that a mid-term performance review meeting and a final meeting are held during the semester.
 - Discussion of any disagreement between self-appraisal and appraisal from supervisor: This part of the performance review meeting should largely consist of the student venting and talking in order to create the perception that the meeting was a two-way communication, given that such perception can reduce the student's defensiveness during the remainder of the performance review meeting and increase the employee's satisfaction with the performance management system as well as enhance perceptions of accuracy and fairness and therefore acceptance of the system.

- Feedback on both positive and negative aspects of a subordinate's performance: It is vital that the instructor does not shy away from providing negative feedback. In providing negative feedback, the instructor should make certain that the feedback is constructive.
- Overall rating/discussion of rewards to be received and rewards to be denied: Once feedback is given to the student with regards to *development* goals, the instructor should provide feedback on how well the student did with the uniform behaviors- and outcomes-related goals. For example, this may be represented by the assignment of a specific letter grade. Discussions of the development goals should precede discussions of the behavior- and outcome-related goals to increase student's satisfaction with the course and acceptance of his or her letter grade.
- Performance renewal and recontracting
 - Performance planning/goal-setting: Another meeting is held with each student after the performance review meeting in order to set new goals. For instance, what courses will the student take the next semester? What extracurricular activities will the student pursue or continue to pursue? What networking events and conferences will the student attend? Will the student attend any specific workshops? All of these questions should be answered by keeping in mind the student's strategic goals as the ultimate goals.
- Additional considerations: Granted, this proposed student performance management system involves more work for instructors who are generally already too busy with their existing workload. To mitigate the problem of work overload of instructors, TAs and even fellow graduate/undergraduate students can serve as coaches who help students go through all six components of the student performance management process: 1) prerequisites; 2) performance planning; 3) performance execution; 4) performance assessment; 5) performance review; and 6) performance renewal and recontracting. This solution has additional benefits. First, the coaches (especially the undergraduates who are generally in need of whatever "real-world" experience they can get) gain practical skills that are generally useful across employment settings and life in general. Second, the students get another source of feedback. This type of peer coaching program is not at all unrealistic and is implemented in both professional and academic setting. For example, the Kelley School of Business at Indiana University–Bloomington maintains an undergraduate coaching program where undergraduate business majors coach fellow undergraduates in their career development efforts.

Case Study: Job Analysis Exercise

Please conduct a job analysis for the position "graduate student enrolled in a master's program in the general field of business." This job analysis may benefit from interviewing incumbents (i.e., other students) as well as supervisors (i.e., faculty). In

addition, of course, you can rely on your own knowledge of the “job.” By the end of your job analysis, follow the O*NET format to create a summary description for the position as well as a list of tasks, knowledge, skills, and abilities needed for successful performance. Use the box “Summary Report for Tractor-Trailer Truck Drivers (from O*NET)” as a template.

(Suggested points: 10, .5[2.2], .5[2.3])

Sample Response:

Description: Attends class and engages in active learning and memorization to complete assignments and meet objectives of the class; performs tasks such as taking notes, voicing opinions and questions, researching companies or current business practices, interacting with team members, and balancing time to get all assignments complete; and may also give oral presentations, analyze balance sheets or economic trends, and defend recommendations given on a company’s operating procedures. Problem-solving skills and originality are also needed.

Tasks

- Attend class
- Complete homework
- Participate in group/team projects
- Write papers
- Conduct research
- Participate in extracurricular activities

Knowledge

- Language: Knowledge of the structure and content including the meaning and spelling of words, rules of composition, and grammar.
- Mathematics: Knowledge of arithmetic, algebra, geometry, statistics, and their applications.
- Computers: Knowledge of computers including hardware, software, and applications.
- Administration and Management: Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Psychology: Knowledge of human behavior and performance; individual differences in ability, personality, and interests; and learning and motivation.
- Communications and Media: Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and communicate via written, oral, and visual media.

Skills

- Reading Comprehension: Understanding written sentences and paragraphs in work-related documents.

- Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Writing: Communicating effectively in writing as appropriate for the needs of the audience.
- Speaking: Talking to others to convey information effectively.
- Mathematics: Using mathematics to solve problems.
- Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- Active Learning: Understanding the implications of new information for both current and future problem solving and decision making.
- Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- Monitoring: Monitoring/assessing performance of oneself, other individuals, or organizations to make improvements or take corrective action.
- Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Time Management: Managing one's own time and the time of others.

Abilities

- Oral Expression: The ability to communicate information and ideas verbally so that others will understand.
- Speech Clarity: The ability to speak clearly so that others can understand.
- Written Comprehension: The ability to read and understand information and ideas presented in writing.
- Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Written Expression: The ability to communicate information and ideas in writing so that others will understand.
- Fluency of Ideas: The ability to come up with a number of ideas about a topic.
- Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
- Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
- Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, or mathematical operations).
- Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
- Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.

- Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions. (This includes finding a relationship among seemingly unrelated events).
- Memorization: The ability to remember information such as words, numbers, pictures, and procedures.
- Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
- Time Sharing: The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).