



How To Perform Self-Assessment

Training Application Notes

MOITAN004

Purpose

This document explains the purpose and nature of self-assessment. It also presents guidelines for performing and troubleshooting self-assessment.

Overview

The purpose of self-assessment is to find out what Job Tasks you can and cannot perform at the present moment in time. This information is important for:

- Matching skills and needs
- Planning future training goals and performance expectations
- Determining what training resources are needed
- Improving the available training

Discussion

Some things to note about self-assessment are:

- Self-assessment is not a test. It is not for use by outside judges to evaluate whether or not your performance is satisfactory. Rather, it is to be used by you to appraise the breadth of Job Tasks you are able to perform.
- Self-assessment is an ongoing process. You are expected to update your self-assessments on a regular basis.

- Your scores are expected to go up and down for certain tasks over time. That is, your scores are expected to drop for tasks that you perform infrequently and improve for tasks that you have been practicing recently.
- Self-assessment is about your ability TO DO. It should not reflect solely what you know or understand about the various tasks of your job. Instead, it should reflect which of those tasks you have done and can still do.
- Self-assessment is not certification and is completely separate from certification. To be certified you must take the certification test(s) as administered by a qualified certifier.

Guidelines

Performing Self-Assessment

People taking self-assessments should use the following guidelines to complete the self-assessments:

- Read each Job Task and its Key Results.

The Key Results have important implications for the boundaries of a Job Task, as well as the meaning of the self-assessment overall. They represent the standard to which a task must be performed. Without them, we cannot understand if a task has been performed successfully, nor can we understand what your self-assessment says you can do.

For example, consider the effect of different Key Results for a task such as "Run 1 mile." A Key Result of 4 minutes as opposed to 15 minutes would greatly impact performance requirements, expectations, and self-assessment scores — possibly changing many scores from 5s to 2s.

- Pick the right score.

- 1, I am not familiar with this Task

A score of 1 should be chosen when you are new to the job or when the technical language of the task is unfamiliar.

Note that even experienced technicians should score 1s when the language of the task is unfamiliar.

- 2, I understand what activities are involved in performing the Task

A score of 2 should be chosen when you understand the technical language of the task or have seen the task demonstrated.

A score of 2 should also be chosen if you have performed the task at another company, but not this company.

Note that non-technical personnel may score 2s on technical Job Tasks.

- 3, I am able to perform the Task and achieve the stated Key Results (K.R.s) (WITH assistance)

A score of 3 should be chosen when you need the assistance of another person to determine what needs to be done to perform the task correctly.

Note that the use of technical documents (manuals, written procedures, job aids, etc.) is not considered "assistance" here. If you can perform the task and achieve the stated Key Results using documentation, but without aid from a person, you should give yourself a score of 4 (see below).

- 4, I am able to perform the Task WITHOUT assistance and achieve the stated Key Results (K.R.s).

A score of 4 should be chosen after you have performed the task for the first time and met the standards on your own, without the assistance of another person. You may use any documents or job aids that you wish. You are not required to have the relevant documentation memorized to score a 4.

Note that a score of 4 is most often used by students in a training class.

A score of 4 indicates, to the organization, that you can perform the task.

- 5, I have performed the Task and have achieved the stated Key Results (K.R.s) more than once.

A score of 5 should be chosen when you are able to perform a task successfully and repeatedly.

Note that a score of 5 is most often used by expert technicians or specialists who are required to perform the task constantly.

A score of 5 indicates, to the organization, that you can perform the task.

- If your score is between two numbers, pick the lower of two scores — "Err on the side of caution."
- If you have performed a task at another company, pick 2, "I understand what activities are involved in performing the Task."
- Ask questions, when in doubt.

Honesty and accuracy are vital to the integrity of the self-assessment. If you are unsure what score to pick, ask your self-assessment administrator for clarification.

Also, if you are unsure of the validity of a Job Task or its Key Results, contact the self-assessment administrator. Your experience is valued!

Troubleshooting Self-Assessment

For self-assessment results to be accurate, you must have clear and relevant tasks, clear performance standards, and a clear system for "scoring" the self-assessments. You must also provide a positive environment in which people feel it is safe to give honest answers. If your self-assessment results are perceived as being inaccurate, you should examine your self-assessments in these areas to correct the problem. These issues are discussed in more detail in the following sections.

Unclear Tasks and Performance Standards

One of the biggest sources of inaccuracy in self-assessment comes from unclear tasks and performance standards.

Common mistakes when defining tasks and performance standards include:

- **Defining tasks as nouns.**

When tasks are defined as nouns, it makes it very difficult for people to determine what action is being described. For example, people will often summarize a whole task using

just the name of the part involved. But consider the difference between an assembly task defined as "Mirror X" and "Build Mirror X." As you can see, the difference is vast. When defined simply as "Mirror X," the task can be interpreted to mean almost anything — install Mirror X, calibrate Mirror X, troubleshoot Mirror X, etc. — which, in turn, will prompt inaccurate responses. By specifying the action, you can eliminate a major source of confusion.

When specifying a task action, you should note, too, that you can improve clarity by using command verbs. Linguistically, this verb form imparts meaning with greater ease than other verb forms. For this reason, for example, "Build Mirror X" is preferable to "Building Mirror X."

- **Defining tasks incompletely.**

To define a task completely, you must include "orienting" information in the definition. Orienting information is that information which provides the full and specific meaning intended. For example, consider the difference between an alignment task defined as "Align Mirror X" and "Align Mirror X to specification." In reality, there may be an interim coarse alignment that can be performed, as well as the final "to specification" alignment. Without including this information, it cannot be determined which alignment task is in question.

- **Excluding performance standards.**

For the sake of brevity and speed when putting together a self-assessment, it is often tempting to exclude specific performance standards in favor of a summary or to define them as the "task completed."

However, this is very dangerous. If you require specific results to be achieved, they must be specifically defined. As is often shown in the real world, going through the motions of a task is no guarantee that objectives will be met. Remember, if you can't define it, you can't achieve it.

- **Substituting "soft skills" for "hard skills."**

One of the goals of self-assessment is to provide an opportunity for the fair and objective evaluation of a person's ability to perform. This means that self-assessment, by nature, can — and should — only address hard skills.

Hard skills are those skills that involve a physical action or operation that produces tangible, quantifiable results. Soft skills, on the other hand, are "personality judgments" masquerading as actions. They are "skills" that can only be evaluated subjectively. Soft skills employ emotional language and include concepts such as "is persuasive," "gets the job done,"

"is a leader," "takes charge," and "has personal chemistry with others." It is very important to exclude all soft skills from your self-assessments, or you will be unable to certify your personnel with any reliability.

It should be noted that it is often tempting to use soft skills to define the tasks for positions such as those found in management and sales, as these jobs can often seem like an "art" to many. As a word of encouragement, though, you should remember even the purest arts all require certain technical skills to be mastered. As painters must mix pigments to produce specific colors, managers must budget and allocate personnel resources and sales people must maintain regular contact with customers and identify new uses and customers for the products they sell to keep their markets expanding.

Relevant Tasks

A self-assessment must address tasks that people will truly perform on the job. If a self-assessment does not do this, it becomes little more than a "wish-list" of tasks and all results are rendered meaningless. People will not treat the process seriously and their answers will become careless and sloppy — if they bother to complete the self-assessments at all.

If your self-assessment results are perceived as inaccurate, you should check to make sure that they address tasks people care about, which are the ones that they must do.

Unclear Scoring System

It is important to have a scoring system that objectively evaluates performance. If your scores reflect only concepts such as "I understand the task" or "I know the task," your results will be very poor — for ultimately, what you really wish to know is if a person can do the tasks in question. Figure 1 (following page) shows an example of a self-assessment for a task and the scoring system recommended by MOI. This system includes statements of both knowledge and action, from which it can be determined what training needs a person has — lecture theory, demonstrations and initial performance practice, additional practice time, or none.

Business Unit: NASA
Project: International Space Station
Self-Assessment and Certification

Task Group: IMUs (Inertial Measurement Units)
Version: A -- **Date of Approval:**
Person Self-Assessing: Pat Johnson

Task Group

Name: IMUs (Inertial Measurement Units)
Objective: To test, adjust, calibrate, and operate the IMUs

Self-Assessment

1 Task: Align the IMUs with the star trackers

Key Result(s):

- 1 The IMUs are aligned every 12 hours and within one hour before major on-orbit thrusting
- 2 The star trackers are oriented so that the optical axis of the negative Z star tracker is pointed approximately along the negative Z axis of the orbiter
- 3 The star trackers are oriented so that the optical axis of the negative Y star tracker is pointed approximately along the negative Y axis of the orbiter
- 4 The star tracker line of sight is referenced to the navigation base and the orbiter coordinate system
- 5 The GPC (General Purpose Computer) knows where the star tracker is pointed and its orientation with respect to the IMUs
- 6 The GPC knows the orbiter's attitude
- 7 The IMU definition of the orbiter's attitude is compared with the GPC definition of the orbiter's attitude, and the correction factor to null the IMU error is determined

(Check One)

(Task & KR's incorrect - check box)

Instructor Only (Min. Cert. Level: DPI)

Certification complete:	(check) <input type="checkbox"/>
By:	(Initials)
Date:	Code:

- I am not familiar with this Task.
- I understand what activities are involved in performing the Task.
- I am able to perform the Task and achieve the stated Key Results (WITH assistance).
- I am able to perform the Task WITHOUT assistance and achieve the stated Key Results.
- I have performed the Task and have achieved the stated Key Results more than once.

Figure 1: This figure shows an example of a self-assessment that might be used for the International Space Station. Note the self-assessment scoring system, which asks participants to consider not only their knowledge but also their ability to perform the task. Note also the use of the command verb form in the task title, the inclusion of "orienting information" in the task title, and the specificity of the key results, which highlight the essential events and outcomes to be achieved.

Negative Environment

Another goal of self-assessment is to provide organizations and their employees the opportunity to identify training gaps and to fill them. Self-assessment is not intended as a replacement for performance reviews by an individual's managers — as there are many factors, other than hard skills, that make a person a desirable or undesirable employee. It is, however, intended to support career development and help employees become better at what they do, as well as expand their realm of expertise.

Consider the effects of running self-assessments in an environment where those with scores in the lowest 10% will see immediate termination. In such an environment, not only will people be encouraged to lie — and the self-assessment results be thereby invalidated — the organization will also fail to develop truly capable employees, as everyone will always be "fully competent." Learning can only take place in an environment that encourages training and allows a student to make mistakes, build experience, and thus competence and confidence. To obtain accurate self-assessment results, you must have an environment which permits them.

A Final Word — Self-Assessment and "Self-Efficacy"

How individuals evaluate themselves on a self-assessment depends on their perceptions of themselves — which is to say, the accuracy of a self-assessment is dependent on individuals' self-efficacy.

"Self-Efficacy" is a social learning concept first advanced by psychologist Albert Bandura. Self-efficacy is defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" [Bandura, *Social Foundations of Thought and Action: A Social Cognitive Theory*, 1986]. Self-efficacy affects our feelings and reactions to things, our decisions, and the amount of effort and time we are willing to spend on solving and overcoming problems. Our sense of self-efficacy is the result of our own successes and failures, what we know others have been able to do or not do, what others have been able to persuade us of, and our physiological state — our health, our stress level, etc.

This means, in the world of performance-based training, that self-assessment is not absolute proof of what a person can and cannot do. Rather, this proof must be provided by certification — the independent verification of a person's ability by someone else.

You may ask what the value of self-assessment is, then, since it cannot offer definitive assurance of a person's ability. The answer is, its value is three-fold, precisely because it makes use of the principles of self-efficacy. First, self-assessment allows individuals to contribute to their performance evaluations and to seek out the training they believe they need without penalty. This in turn allows them to build self-assuredness, which is as much a requirement as ability for individuals to succeed on the job. Second, because it rewards individuals to obtain needed training, self-assessment encourages proactive training within a company and promotes organizational readiness. And finally, self-assessment saves money. Like all business processes, certification is not an activity without cost. And while self-assessment is not an absolute proof of ability, it is a fairly accurate one, as people are generally honest and also unwilling to "oversell" themselves. Self-assessment allows a company to ascertain its training needs inexpensively and to certify personnel exactly when they are ready.

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