Performance rating written report assignment

For example, If the benchmark of dealing 52 cards In 0. 0 minutes Is established, a complete and specific description should be given of the distance of the four hands alt with respect to the dealer, as well as the technique of grasping, moving and disposing of the cards. The benchmark example should be supplemented by a clear description of the characteristics of an employee carrying out a normal performance. A representative description of such an employee might be as follows: a worker who Is adapted to the work and has attained sufficient experience to perform the Job In efficient manner, with little or no supervision.

The worker possesses coordinated mental and physical qualities, enabling him or her to proceed from one element to another without hesitation or delay, In accordance with the principles of motion economy. The worker maintains a good level of efficiency through knowledge and proper use of all tools and equipment related to the Job. He or she cooperates and performs at a pace best suited for continuous performance.

However, Individual differences between workers still exist Differences in inherent knowledge, physical capacity, health, trade knowledge, physical dexterity, and training can cause one operator to outperform another consistently and progressively. Sound rating characteristics The first and most Important characteristic of any rating system Is ACCURACY. Perfect consistency in rating is impossible. The rating plan with variations greater than B± 5 percent should either be improved or replaced. Time study analysts who to conduct such studies.

It is not difficult to correct the rating habits of an analyst who consistently rates high or consistently low. But it is very difficult to correct the rating ability of an analyst who is inconsistent, rating too high today and too low tomorrow. Inconsistency, more than anything else, destroys the operator’s confidence in the time study procedure. A rating system that is simple, concise, easily explained, and keyed to well-established benchmarks is more successful than a complex rating system requiring involved adjustment factors and computational techniques that may confuse the average shop employee.

Workstation rating Performance rating should only be done during the observation of elemental times. As the operator progresses from one element to the next, using the prescribed method, analyst should carefully evaluate speed, dexterity, false moves, rhythm, coordination, effectiveness, and the other factors influencing output. Once the performance has been Judged and recorded, it should not be changed. However, this does not imply that the observer always has perfect Judgment. If the rating is questioned, the Job or operation should be restudied to prove or disprove the recorded evaluation.

Immediately after completing the study and recording the final performance factor if overall rating even elemental rating was used, the analyst can approximate the operator’s performance. This gives the operator an opportunity to express his or her opinion about the fairness of the performance factor, and to give his opinion directly to the person responsible for its development. Rating elements versus Overall study On short-cycle

repetitive operations, little deviation in operator performance is realized during the course of the average-length study (1 5 to 30 minutes).

In such cases, it is perfectly satisfactory to evaluate the performance of the entire study and record the rating factor for each element. Remember power-fed or machine- controlled elements are rated normal, or 100, as their speed cannot be changed at will by the operators. In short-cycle studies, an observer who endeavors to reference rate each element in the study will be so busy recording values that he or she will be unable to effectively observe, analyze, and evaluate the operator’s performance.

When the study is relatively long (over 30 minutes) or is made up of several long elements, operator performance may vary during the course of the study. They can consistently and accurately rate elements longer than 0. 10 minute as they occur. If a study is comprised off series of elements shorter than 0. 10 minute, then no effort should be made to evaluate each element of each cycle of the study, as time does not permit such action. It is satisfactory to rate the overall time of each cycle or a group of cycles.

RATING METHODS Speed rating – Is a performance evaluation method that only considers the rate of accomplishment of the work per unit time. In this method, the observer measures the effectiveness of the operator against the concept of a qualified operator doing the same work, and then assigns a percentage to indicate the ratio of the observed performance to performance determine whether it is above or below normal. 100 percent is usually considered normal.

A rating of 110 percent indicates that the operator was reforming at a speed 10 percent greater than normal, and a rating of 90 percent would mean that the operator was performing at a speed 90 percent normal. Two tasks were suggested by Preserve (1957) to develop an initial mental model ; (1) walking 3 miles per hour (4. Km/her), that is, 100 feet (30. 5 m) in 0. 38 minutes and (2) dealing a deck of 52 cards into four equal piles closely spaced In one half minute. Time study analysts use speed rating for elemental, cycle, or overall rating.

The Westinghouse system One of the oldest used rating system was developed by the Westinghouse Electric Corporation. Then termed leveling, it is outlined in detail in Lowry, Maynard, and Estrangement. This method considers four (4) factors in evaluating the performance of the operator: 1. Skill Lowry defines skill as ” proficiency at following a given method,” and further relates it to expertise, as demonstrated by a proper coordination of mind and hands. A person’s skill in a given operation increases over time, because increased familiarity with the work brings speed, smoothness of motions, and freedom from hesitations and false moves.

The Westinghouse rating system lists these six degrees or lasses that represent an acceptable proficiency for evaluation: Poor, fair, average, good, excellent, and super. 2. Effort This rating method defines effort as a “ demonstration of the will to work effectively. ” Effort is representative of the speed with which skill is applied, and can be controlled to a high degree by the operator. The six effort classes for rating purposes are: Poor, fair, average, good, excellent, and excessive 3. Conditions In this performance rating procedure affect the operator and not the operation.

Time study analyst rate conditions as normal or average in more than a majority of instances, as conditions are evaluated in comparison with the way they are customarily found at the workstation. Elements affecting working conditions include temperature, ventilation, light and noise. The six general classes of conditions, with values ranging from +6 percent to -7 percent, are ideal, excellent good, average, fair, and poor. 4. Consistency Elemental time values that constantly repeat would have perfectly consistency.

This situation occurs very frequently, as there always tends to be dispersion due to the and effort, erroneous watch readings, and foreign elements. The six classes f consistency are perfect, excellent, good, average, fair and poor. Perfect consistency is rated +4 percent and poor consistency is rated -4 percent. Once the skill, effort, conditions and consistency of the operation have been assigned, and their equivalent numerical values established. For example, if a given Job is rated CA on skill.

CLC on effort, D on conditions and E on consistency, the performance factor would be as follows; The Westinghouse rating system demands considerable training to differentiate the levels of each attribute. The procedure generally followed is; 1 . A film is shown and he operation explained. 2. The film or tape is reshow and rated. 3. The individual ratings are compared and discussed. 4. The film or tape is reshow and the attributes are pointed out and explained. 5. Step 4 is repeated as often as necessary to reach understanding and agreement.

Synthetic rating Morrow (1946) established a procedure known as synthetic rating. This procedure determines a performance factor for representative effort elements of the work cycle by comparing actual elemental observed times to times developed through fundamental motion data. The performance factor may be expressed algebraically HO Where; P= performance or rating factor. Fundamental motion time. 0= observed mean elemental time for the elements used in F. Objective Rating Developed by Mendel and Dander (1994), eliminates the difficulty of establishing a normal speed criterion for every type of work.

This procedure establishes a single work assignment to which the pace of all other Jobs is compared. After the Judgment of pace, a secondary factor assigned to the Job indicates its relative difficulty. Factors (1) Amount of body used, (2) Foot pedals, (3) Femaleness, (4) Eye-hand coordination, (5) Handling or sensory requirements, and 6) Weight handled or resistance encountered. The rating (R) can thus be expressed as follows: where: P= Pace rating factor. Difficulty adjustment factor. Rating Application R= PIX job The value of a rating is written in the R column of the time study form.

After the stopwatch phase is complete, the analyst multiplies the observed time (OR) by rating (R), scaled by 100, to yield the normal time (NT). RATING ANALYSIS TO X 100 Four criteria determine whether or not time study analyst using speed rating can consistently establish values within 5 percent of the rating average calculated by a rope of trained analyst. These are: 1. Experience in the class of work performed. 2. Use of synthetic benchmarks on at least two of the elements performed. 3.

Selection of an operator who gives performances somewhere between 85 and 115 percent of standard pace. 4. Use of the mean value of three or more independent studies and/or different operators. To assure speed rating consistency, both with their own rates and with the rates established by the others, analyst should continually participate in organized training programs. One of the most widely used training methods is the observation of audiotapes or motion-picture films illustrating diverse operations performed at different productivity levels.

Figure 10-3. A straight LINE indicates perfection, whereas high-irregularities on both sides of the line indicate inconsistency, as well as an ability to evaluate performance. The analyst rated the first film 75, but the correct rating was 55. The second was rated 80, while the proper rating was 70. In all but the first case, the analyst was within the company’s established area of correct rating. Note, that due to the nature of confidence intervals, the B±5 percent accuracy criterion is valid only around 100 recent or standard performance.

When performance is below 70 percent of standard or above 130 percent of standard, an experienced time study analyst would expect an error much larger than 5 percent. The closer the time study analyst’s rating comes to the x-axis, the more correct he/she is. To determine quantitatively an analyst’s ability to rate performance, compute the percentage of the analyst’s rating contained within specified limits of the known ratings. This can be done as follows: 1 . Compute the mean difference (CD)between the analyst’s rating and the actual rating for n test (n should be at least 15 observations). Compute the standard deviation (SD)of the differences in

rating 3. Compute the normal deviate(Z), where; 4. Compute the normal deviate (Z), where; Z = +5 (or some other figure of accuracy) – CD 5. Compute the area under the normal distribution curve between B±5 (for some figure of accuracy) centered at CD, which is assumed to be equal to deed, and Sd which is assumed to be equal to ad Analyst overrated low performance levels and underrated high performance levels. This is typical of novice raters who tend to be conservative raters and afraid to deviate too far from standard performance.

In statistical applications, this tendency is termed regression to the mean and result in a relatively flat line compared to the expected line with a slope of one. The novice rater who rates higher than the true value for performance below standard performance produces a loose rate. For performance above the standard, a novice rater who rates lower than the true value produces a tight rate. Straight Speed Rating The performance rating plan that is easiest to apply, easiest to explain and gives the most valid results. Rating Training -To assure speed rating consistency, both with their own rates and with the rates