

RETRAINING IS NOT A CORRECTIVE ACTION Digging Deeper When Investigating the Human Cause of Incidents

By Ryan Word

Safety professionals are often tasked with the investigation of incidents and near misses, with the goal of determining the root cause. Hundreds of techniques and thousands of personalities can lead to different degrees of skill in this endeavor.

Tools such as a fishbone diagram, five-why analysis, and culpability matrix can help hone relevant skills and strengthen investigative abilities for OSH professionals. When it comes to the overall investigation process, it is up to each OSH professional to decide which tool is best to use to find the root cause. Rather than teach how to perform an incident investigation, this article aims to provide the reader with additional tools for investigating after it has been determined that human cause may have been a contributing factor or root cause for an incident.

Too often, the author has seen investigations where hours of time were spent investigating the root cause of an incident, with a tremendous number of photos taken and employee interviews conducted, only to conclude with a simple call and corrective action: “Employee error—Retraining required.” The problem with this is that employee error is inevitable, and retraining is not a corrective action. And while this concept has been embraced and used in the author’s career over the past several years, it has been truly sharpened and further defined with the application of human and organizational performance (HOP) principles.

HOP Principles Overview

HOP is not a program or product that one can buy off a shelf, but an operating philosophy that tunes OSH professionals’ focus on both the human factors and organizational causes of incidents. The basis for these principles is described by Conklin (2019):

1) Human error is normal. Safety professionals must start with the premise that to err is human. All people, regardless of skills and ability, have the potential to make mistakes, and this is completely normal. The necessity for this principle comes from an attitude that exists in some workplaces that only bad employees make mistakes.

2) Blame fixes nothing. If analysis determines that human cause was a factor, it is critical to know that blame fixes nothing. According to this principle, you

can either blame and punish or learn and improve; you cannot do both. Avoid the temptation to blame employees and accuse them of making bad decisions or not following their training. The moment blame is placed on the employee, their willingness to listen, learn and improve is greatly diminished.

3) Learning is vital. This does not refer to compliance training. While it is good for employees to have a base of safety knowledge, this principle refers to operational learning. Every incident is an opportunity to learn. We can learn what went right

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so that we can continue to support those efforts. We can learn what went wrong so that we can try to avoid those results. We can learn how we got to the point of incident in the first place. Even the simplest of incidents holds the potential for great information if we are willing to learn.

4) Context drives behavior. As humans, it is far too easy to judge what we see from the context of our own mind. This is not an insult; this is human nature. We see the world around us based on the context of what we have experienced, and the same holds true in the workplace. A manager with years of experience may look at an incident and not understand how an employee made a particular decision, but by looking at the incident through the employee’s eyes at the time of the incident, we stand to gain valuable information about the influences and variables that led to the employee’s actions.

5) How you respond to failure matters. The way management or company leadership responds to an incident makes all the difference to the employees. If employees feel that management is and only investigating to find out who should be fired, this develops a culture of fear. If the employees can speak without fear because they know

that management’s priority is to learn from mistakes and prevent them from recurring, this builds a culture of interdependent safety.

The Investigation Process

When determining root cause, the goal is to find the first domino in the chain. What event, failure or decision let that first domino topple over? The investigation team should also be looking for contributing factors, which act as additional dominoes carrying that initial event, failure or decision down the line until the incident itself. While the investigation process itself is not the primary focus of this article, two tools can help investigators get the process started.

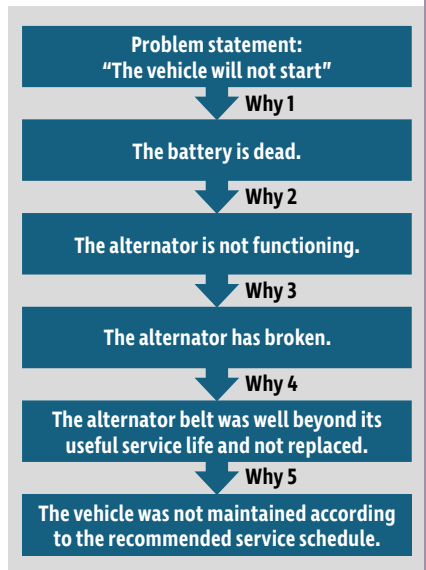
•Five-why analysis. The concept of five-why analysis is simple. Start with a statement of what occurred, then repeatedly ask, “Why?” up to five times to identify the root cause (Figure 1). The theory of this technique is that it will help you reach deeper causes than when you started. On occasion, using this technique may lead you to a new line of questioning. The process of asking why repeatedly does not apply only to OSH; it can be used anywhere in life where deeper understanding is desired.

•Fishbone diagram. When using a fishbone diagram, start with the problem statement, then work backward, identifying different categories of contributing factors (Figure 2). Each category is then investigated independently to determine causes. This technique brings people with specific backgrounds into the investigation to provide organizational context to the investigation and helps assign corrective actions to those best suited for correction.

Human Causes

Regardless of the investigation tools used, if human cause is identified as a root cause or contributing factor, then a human cause investigation should be completed. This is where the HOP principles truly shine. Too often, the author has found that simply identifying human

FIGURE 1
FIVE-WHY ANALYSIS

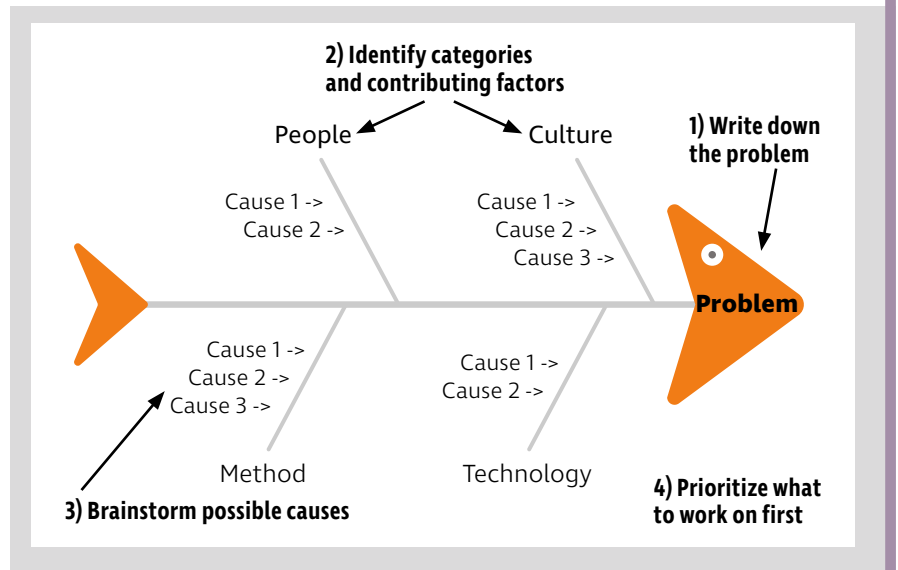


error as a cause is considered good enough; the company is happy to identify the person to blame, administer consequences and finish the reporting paperwork. If machine failures, environmental problems or technology issues occurred, then corrective actions would be generated. But in the author's experience, when it comes to humans, the most common corrective action is retraining.

A culpability matrix can be used to gain a deeper understanding of the contributing factors within a human cause. Using this tool, a systematic approach can be developed for generating substantive corrective actions based on the underlying motivations. This tool can also be used to determine if and when disciplinary action is appropriate for employees involved in an incident. Figure 3 (p. 20) shows an example overview of a culpability matrix. This example represents an amalgamation of the author's experience and the work of others.

The matrix includes a series of questions to help determine cause. From each question extends a flow chart based on potential answers. Certain answers lead to interpretation, then to corrective actions. Try to avoid assigning blame to an employee unless you reach the bottom of the chart. Instead, focus on the behavior, what led to that behavior, and what corrective actions can either prevent the behavior from happening again or reduce the risk and allow for "failing safely" in the event the behavior happens again.

FIGURE 2
SAMPLE FISHBONE DIAGRAM



Culpability Matrix Causal Questions

The following offers an explanation and example for the causal questions used in the culpability matrix.

1) Was the job expectation clear? If the employee involved in the incident did not have a clear understanding of their job expectation, then it is not entirely fair to blame the employee for the poor outcome. Employees, especially new hires, are subject to peer and internal pressures to continue working even if they are unsure of the task or if they are inadequately trained. Even if employees have stop-work authority, exercising it is difficult for most people.

Example: Imagine that a new hire is sent to the production floor with instructions to clean the floor. The individual grabs the nearest hose and starts spraying the floor, only to find out that the hose is dispensing chemicals, not water.

This scenario might be categorized as human error, but why did the error occur? This is a case where training or retraining is appropriate. Ensure that an effective program is in place for training new hires before they are exposed to hazards in the workplace.

If the investigation shows that the job expectation was clear, but the incident occurred anyway, then move on to the next question.

2) Is there a current rule or standard operating procedure? Employees cannot be held accountable for rules that have not been communicated. Having a safety manual, establishing rules, or

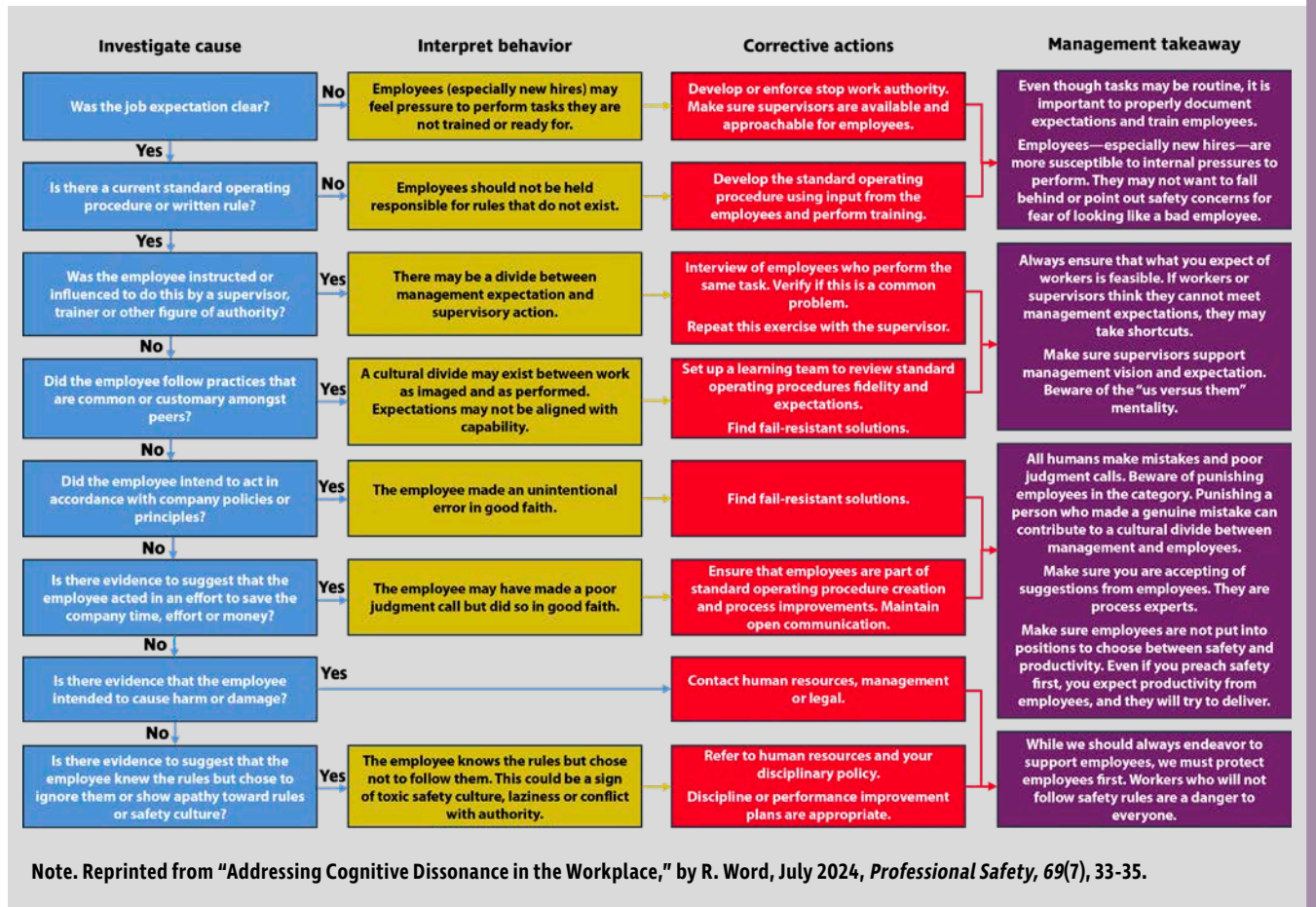
providing written standard operating procedures is crucial for proper training and accountability. It is not uncommon for companies to have tasks that do not have a documented rule because they have been routine in the past. Remember that, especially for new hires, no task is routine or ordinary. Rules and procedures set the expectation for how workers can perform the job safely.

If the investigation determines that the employee broke no rule, but a rule should be in place, then develop the rules or procedures needed to prevent the incident from occurring again. Be sure to include the workers who were involved in the incident in the rulemaking process because they can provide valuable context.

If the investigation shows that a rule was in fact in place and that the rule is achievable but was simply not followed, then move on to the next question.

3) Was the employee instructed or influenced by a supervisor or authority figure? Unfortunately, the way management expects a task to be done and the ways supervisors allow the task to be completed are not always the same. Be on the lookout for a divide between management's expectations and supervisory action. It may be appropriate to interview other employees performing similar tasks to see if their answers to this question are in agreement. If it is determined that an employee was following a supervisor's instructions when they broke a company rule, then it would not be appropriate to punish the employee

FIGURE 3
SAMPLE CULPABILITY MATRIX



for what the supervisor allowed. In such a situation, the investigation focus should then shift from the employee to the supervisor.

Repeat the entire process with the supervisor, asking the same questions to find the motivation behind the supervisor’s willingness to bend or break rules, which led to an employee-involved incident. If it is determined that this is not a contributing factor to the incident, then move on to the next question.

4) Are supervisors or managers aware of this action but allowing it to continue? A divide may exist between management’s expectations and supervisor reactions. Think of the idiom, “It’s not what you preach, it’s what you tolerate.” Supervisors must embody company expectations and lead by example. If supervisors do not agree with a policy or procedure, they may not be willing to enforce it when management is not watching. Make sure there is supervisory team buy-in on policies and procedures.

Employees may want to please their supervisors and may focus more on supervisor satisfaction than management’s rules. For corrective actions in such a situation, turn focus away from the employee and onto the authority figure who has allowed policies and procedures to be broken. Repeat this process with the authority figure to identify corrective actions for preventing future deviations from policy.

5) Did the employee follow customary practices or training that are common among their peers? Employees are often the process experts. They attempt to find the most efficient way to get a task done quickly, and sometimes this results in dangerous shortcuts. In reality, the only difference between a shortcut and a process improvement is how successful it is. The other consideration for this question is the fidelity of the expectation itself. Take a moment to evaluate the expectation given to the worker. Is the expectation reasonable,

achievable and intuitive? If employees believe that what they were being asked to do is not possible, feasible or reasonable, they may find their own means and methods.

The best corrective action for this type of failure is to create a learning team. Convene several workers who performed the same or similar tasks, present them with the instruction and gather feedback. Rely on the workers to communicate their struggles. This learning model helps identify the stressors that prevent employees from succeeding.

Example: Instead of locking out food production equipment, an employee reached into the equipment while it was running in an attempt to clean it. The employee was caught by the machine and injured. The company has a lockout/tagout policy that is heavily influenced by the supervisors, and the employee had been properly trained. This machine requires several minutes for proper shutdown and lockout. Several employees view this

process to be a burden on production and subsequently came up with a way to clean the machine while it was running. The employee involved in the incident was the first to be injured in this manner.

In this instance, it would be inappropriate to punish only the employee who was caught doing something that all employees do. This is a systematic problem that is likely to repeat. There is an opportunity for the company to learn what causes this nuisance task and for the employees to learn the proper way to safely perform it. Punishing the injured employee would not serve either purpose.

6) Is there evidence to suggest the employee acted to help the company save time, effort or money? If so, this is an unintentional error made in good faith. As with the preceding questions, it may be that the culture prioritizes efficiency and productivity over safety, thereby encouraging workers to take shortcuts. Avoid punishing the employee in this circumstance and instead focus the investigation on why the employee felt the need to make this decision on their own. Are workers not encouraged to contribute ideas? Are workers discouraged from thinking outside of the box? Are managers receptive to new ideas? Are supervisors listening to employees? This is a cultural divide that can typically be bridged with good communication.

7) Did the employee intend to act in accordance with company principles? The author tends to classify investigations that end on this question as unintentional errors made in good faith. To err is human, and blaming an employee for an unintentional incident can stifle communication and cause angst and anger between workers and supervisors.

Example: An operator on a forklift backs up too far and strikes a wall while turning. The employee was trying to look behind where the forklift was going and at the load to make sure it cleared the turn but misjudged how much room they had.

No corrective actions are needed when it comes to simple human error. Several sayings may apply in this case, such as “360° awareness” or “situational awareness,” but these are not actionable items. Unless an obvious distraction was present, such as concurrent cell phone use, it is extremely subjective to conclude that employees are not aware of their surroundings. Even a seasoned operator can make mistakes. Rather than focusing on the human that made the error,

focus on fault tolerance. Make systems or machines more resistant to human error. Consider providing a backup alarm or a curb to prevent the machine from striking the wall if a similar error occurs.

8) Is there evidence to suggest the employee intended to cause harm, damage or loss? While it is important to remember that most employees have good intentions, in rare circumstances an employee may not have good intentions. If it is determined that an incident was caused intentionally, the involved worker may be the only cause and contributing factor. At that point, controlling or removing the person is the only corrective action.

Dig deeper and ask questions to better understand the rationale behind people’s decisions.

9) Is there evidence that the employee knew the rules but ignored or showed apathy toward them? When employees know the rules, understand expectations, and have the support of management and supervisors but still do not follow them, it can be a sign of a weak safety culture or apathy toward rules and authority. While every effort should be made to support employees and protect the investment made in their success, if they are not willing to protect themselves or follow the rules, they may become a danger to themselves and others. At this point, the only corrective action remaining may be controlling or removing the person.

Conclusion

Too often, when employers hear about HOP principles, they fear it will become a “get out of jail free card” for employees. The intent behind the culpability matrix is not to excuse all employee actions, but rather to develop an investigative process that allows for true accountability. The word “accountability” comes from “account,” meaning to tell a story. When safety professionals focus on learning and improving without punishing and blaming, employees are allowed to tell their story. Gaining the employees’

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added context can provide a better understanding of how an incident happened and how an employee was led to human error. Changing the focus from human error to the cause of human error fosters an environment where employees are comfortable communicating with supervisors and management about safety and do not live in fear of punishment for simple mistakes.

Investigating incidents and near misses is crucial for preventing further incidents. While there are many investigation methods, it is important to consider HOP principles. These principles highlight that making mistakes is normal, blame does not solve anything, learning from incidents is key, context shapes behaviors, and how management reacts to failure makes a difference.

When investigating, it is not enough to simply blame human error and call for more training. Dig deeper and ask questions to better understand the rationale behind people’s decisions. By asking questions about job clarity, rule following, supervisor influence and motivation, real root causes can be discovered. Instead of fixating on human calls and blaming workers, focus on organizational improvements to ensure that rules are clear, training is good quality, and safety is a top priority for everyone.

Effective incident investigation requires technical tools, operational knowledge and a basic understanding of human behavior. By utilizing HOP principles and tools such as a culpability matrix, safety professionals can identify more illuminating root causes and make the workplace safer for everyone while building safety culture in the process. **PSJ**

Reference

Conklin, T.E. (2019). *The 5 principles of human performance: A contemporary update of the building blocks of human performance for the new view of safety*. Pre-Accident Investigation Media.

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