

**E N E R G Y
S A F E T Y
C A N A D A**

Assessing & Developing Young, New, & Inexperienced Workers

**A practical guide for
supervisors and trainers
in the energy industry.**

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OVERVIEW

Young, new, and inexperienced (YNI) workers present significant and unique challenges to supervisors, especially in high-risk work environments. They may be eager to prove themselves, reluctant to ask questions, and increasingly confident in their abilities¹. At the same time, they have the least amount of experience and exposure to failure modes and abnormal conditions. The result is a worker who may appear confident yet unprepared. *Your challenge as a supervisor is to see beyond what's on the surface and uncover flawed assumptions and misconceptions before they lead to problems in the field.* Yet, how do you know when a new worker is ready to perform a task independently? How do you know what they understand vs. what they do not?

Key concept

YNI workers are more vulnerable to workplace injuries, accidents, and hazardous exposures than more experienced workers. They are also more likely to perform physically demanding tasks, encounter unfamiliar risks, and face situations where they must make high-stakes decisions with limited experience to draw on.

These questions are especially important in industries where workers routinely interact with complex systems, hazardous equipment, and dynamic operating conditions with high stakes. In these environments, competence goes beyond the ability to follow a procedure. It is the ability to understand what is happening, recognize when conditions are changing, anticipate potential problems, and adapt when situations do not go as planned.

This guide provides practical tools and strategies to help supervisors assess, develop, and support YNI workers. It emphasizes understanding how workers think, what assumptions they are making, and where their understanding may be incomplete. Making these hidden aspects of work more visible can

improve readiness decisions, coaching, and the development of *sensemaking*² and *decision-making* skills that can keep YNI workers safe.

Sensemaking is the process of figuring out what is happening in a situation and what it means. Experienced workers constantly interpret information, recognize patterns, and update their understanding as conditions change. YNI workers are still developing these abilities.

Challenges

Supervising YNI workers involves making decisions about readiness and responsibility often with incomplete information. You must determine when workers are ready to take on new tasks, where additional training and support is needed, and how much independence can be given, all while balancing safety and productivity.

The following questions reflect common situations that you may encounter in daily operations. As you read through them, consider whether they feel familiar or relevant to your own experience.

Have you ever:

Assessing readiness and competence

- Wondered whether a worker was ready to perform a task on their own?
- Seen a worker complete a task successfully but still felt unsure about their understanding?

Assessing understanding and assumptions

- Been surprised that a worker made a mistake that you thought was obviously avoidable?
- Suspected a worker was making assumptions that were incorrect?

Communication and instruction

- Given instructions that seemed clear, but the outcome wasn't what you expected?

Confidence vs. capability

- Worked with someone who acted confident but may have not fully understood the risks?

Learning and development

- Found it difficult to track whether a worker is improving over time?
- Wondered how to better support a worker beyond just providing instructions?

Engagement

- Been unsure whether a worker fully understood but chose not to speak up?
- Struggled to get a worker to explain their thinking or decision making?

If these situations feel familiar, you are not alone. These are common challenges that supervisors face when working with YNI workers, particularly in complex and high-risk environments. They point to a common challenge in supervision: It is often difficult to tell what a worker truly understands based on performance alone.

Workers can follow instructions, successfully complete tasks, and appear confident while gaps in their understanding remain hidden.

Where to begin with this guide?

Addressing these challenges requires a shift in how we think about supervision. It is less about directing work or checking task completion and more about understanding how workers are making sense of the job and helping them develop that understanding.

Much of what drives worker behavior is not immediately visible. You can observe what workers do, but the assumptions, interpretations, expectations, and prior experiences behind those actions remain hidden. These factors shape how they recognize risks, make decisions, and respond to uncertainty. Throughout this

guide, we refer to these hidden elements of worker thinking as the *shadows*.

Shadows are the hidden assumptions, misunderstandings, and gaps in knowledge that influence performance. They often remain invisible during routine work and only become apparent when conditions change, or something goes wrong.

The good news is that these shadows can be made more visible. Through everyday conversations, walkthroughs, questions, stories, and feedback, you can gain insight into how workers are thinking and where their understanding may be flawed or incomplete.

How to use this guide

This guide and the accompanying Supervisor Field Guides are designed to work together. If you are looking for practical techniques you can put to use right away, start with the Field Guides. They provide quick, actionable guidance for:

- Using Storytelling to Build Competence
- Eliciting Stories to Develop Worker Thinking
- Surfacing the Shadows
- Providing Effective Feedback

If you want to dig deeper, use this guide to explore the ideas behind those techniques, including how workers learn, why understanding can remain hidden, and how adopting new mindsets can make every day coaching more effective.

At a high level, the approach is simple: understand how workers learn (and where they struggle), approach interactions with curiosity, and use everyday coaching techniques to make worker thinking visible.

This is not about adding new tasks or formal processes. It is about making small adjustments to interactions that are already happening so you can better understand workers, direct coaching where it is needed, and help them develop the competence to handle increasingly complex situations.

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1.0 UNDERSTANDING COMPETENCE & WORKER READINESS

One of the biggest challenges in supervising YNI workers is determining whether they are capable and ready to do the job. Organizations use procedures and qualifications to help make this judgment, but these approaches have limitations. Early success can be misleading because workers may learn how to follow procedures before they fully understand the reasoning behind them. In stable conditions, these gaps may not create obvious problems. They become more visible when situations are unfamiliar, complex, or do not unfold as expected.

Competence is more than the ability to repeat a task, particularly in work involving uncertainty and variability. It develops over time through experience, feedback, reflection, and exposure to changing conditions. As workers gain experience, they build a deeper understanding of the task and the larger system, including how equipment behaves, how problems emerge, how the system responds, and how to adapt when conditions change.

What separates experts from novices in complex and high-stakes domains is not a mastery of the procedures. Experts develop deep tacit knowledge through immersion in the work, trial-and-error, and continuous reflection.

How YNI workers think about the job

Workers do not approach tasks with a complete understanding of the system or process. Instead, they build their own internal pictures, or mental models, of how things work³. These mental models shape what workers' notice and pay attention to, what they expect to happen, and how they make decisions.

Mental models are the beliefs about how something works, including its limitations. They influence how workers recognize risk, solve problems, and make decisions. YNI workers are still developing their mental models of the job.

For YNI workers, these mental models are often incomplete, oversimplified, or incorrect because they are based on limited experience. Supervisors cannot directly see these models and the assumptions workers are making unless they deliberately look for them.

How learning develops over time

Learning is rarely a straight line. Workers develop understanding gradually, often building only partial or simplified interpretations of how a task or process works. These interpretations are part of the worker's mental model. Early in development, their model may be limited and heavily tied to specific situations they have already experienced. Because of this, workers often struggle under uncertain conditions when information is limited, or when they face a situation that differs from what they've seen before⁴.

Experience can be misleading

Time on the job is not equivalent to the amount of competence. Repetition can create familiarity and confidence without developing a deeper mental model. A worker can become comfortable performing routine tasks while still lacking awareness of important cues and failure modes. Similarly, workers who have only experienced "normal" operations may not recognize when something is unusual or beginning to go wrong.

Where YNI workers commonly struggle

Because YNI workers are still developing their limited mental models, they are more vulnerable to certain types of thinking errors and blind spots. Common challenges include:

- Overgeneralizing from previous successes
- Failing to anticipate how conditions could change
- Missing anomalies or subtle warning signs
- Accepting information or assumptions at face value without questioning them

These challenges are normal parts of learning, especially in more complex work environments. However, they can create safety and operational risks if they remain hidden.

2.0 MINDSETS: HOW SUPERVISORS APPROACH THE WORK

Before you ever begin training a YNI worker, you already have beliefs about how people learn, how skills and abilities develop, what knowledge is most important to teach, and how much support different workers need. Whether these beliefs are consciously recognized or not, they influence how you approach training.

Table 1.

Theme	Fixed Mindset	Growth Mindset
Failure	Failure is the limit of my abilities	Failure is an opportunity to learn
Challenges	I'm either good at it or I'm not	Challenges help me grow
Novelty	I stick to what I know	I like to try new things
Feedback	My potential is predetermined	Feedback is constructive

Importantly, these beliefs are not “right” or “wrong”, they simply reflect different ways of approaching the same issues, each with potential benefits and drawbacks depending on the situation.

These beliefs about ourselves and the people around us are called mindsets⁵. They act as a lens through which we interpret situations, helping us decide what is important, and how we should respond. They influence what we notice, the questions we ask, the assumptions we make, and the actions we take. For example, a supervisor with a curious mindset is more likely to ask questions when observing a worker complete a task. Rather than judging whether they are right or wrong, they try to understand how the worker is thinking about the job. In contrast, a supervisor with a more critical mindset may focus primarily on spotting mistakes and correcting behavior, which can limit opportunities to uncover gaps in understanding and support learning.

Because mindsets shape how the supervisors interact with workers, they also shape the learning environment. Some supervisor mindsets encourage learning and growth, while others can unintentionally limit a worker's development and obscure gaps in their understanding. Below are some common themes and statements you have likely heard or said yourself. These reflect mindsets about your own abilities. Do any of them sound familiar?

As you read through the following supervisor mindsets, resist the temptation to immediately judge them as good or bad. Instead, take a moment to reflect on your own experiences.

For each consider:

- What is helpful about this way of thinking?
- What challenges or unintended consequences could it create?
- How might YNI workers respond to it?
- Does it reflect your own approach to training or experiences being trained?

Table 2.

Theme	Traditional View	Development-Oriented View
Curiosity	It's faster if I just tell the worker the right way. They'll learn from repetition.	I don't expect the worker to know everything. I start by asking them what they think is happening and we figure it out together.
Problem-Solving	All jobs can be boiled down to procedures and steps.	Jobs have a lot of unpredictability. Workers need to be able to adapt & problem solve amidst uncertainty
Teaching	If I see a worker making too many mistakes, I may need to let them go.	Mistakes are meant to happen in training; they allow me to understand what the worker is missing and how I can support them.

Curiosity

Curiosity can be a cheat code for supervisors. When a worker makes a mistake or struggles with a task, the natural response is to correct the behavior. Curious supervisors instead become detectives and try to understand why it happened and where the worker's understanding may be incomplete.

Curious supervisors use a variety of techniques to explore a worker's reasoning. They ask workers to think aloud so they can follow their decision-making process. They use open-ended questions and ask “why” to encourage workers to reflect on their actions. They challenge assumptions with “What if” questions and ask workers to propose alternative explanations. Most importantly, they allow workers to generate their own insights. Studies show that people tend to learn more deeply when they make their own discoveries and generate self-explanations⁶. One trainer summarized it well, by saying “*It's extremely difficult to cultivate curiosity in new workers, but it's very easy to kill it*”. Approaching workers with curiosity can also help instill curiosity in their own work⁷.

Key concept

Training workers to be curious can help transform them from passive task-doers to active problem-solvers. Cultivating curiosity leads to continuous learning and can spark innovation.

Problem-solving

Procedures are vital to ensure consistency and safe operations. As supervisors, it is natural to emphasize following procedures because they capture important lessons learned and provide structure. However, when a worker is struggling or making mistakes, simply redirecting them to the correct steps may not address the underlying issue. The challenge may be less about what they are doing and more about how they are thinking about the problem.

A problem-solving mindset focuses on helping workers make sense of situations rather than simply recalling procedures. Questions such as, “What's going on here?”, “Why do you think that happened?”, or “What could this be signs of?” encourage workers to interpret information, weigh options, and develop their own understanding. By helping workers learn

how to think through problems, supervisors prepare them to adapt when conditions change and when uncertainty arises.

Key concept

Procedures are excellent training tools. They standardize work, reduce workload, capture organizational knowledge, and help workers consistently perform tasks safely. However, no procedure can anticipate every condition, variation, or unexpected event. When situations become unfamiliar or complex, workers need more than procedures to respond effectively.

Teaching

Training and evaluation serve different purposes. Evaluation measures whether a person has met a standard, while training is intended to help develop the knowledge, skills, and abilities needed to meet that standard. Supervisors with a teaching mindset recognize this distinction and know when to flip between these modes. Focusing on training involves creating opportunities for workers to explore, test their ideas, make mistakes (when appropriate/safe to), and learn from feedback without feeling judged.

Rather than immediately correcting errors, supervisors with a teaching mindset use questions and feedback to guide learning. They ask questions like, “What led you to that choice?” and “Did you consider...?” to encourage reflection and allow workers to discover errors in their own thinking.

These mindsets represent different ways of thinking about supervision, but their real value comes from how they impact everyday interactions with workers. Supervisors with a curious, problem-solving, and teaching mindset approach learning opportunities differently. In many ways, we have already begun discussing the practical tools these supervisors use. Asking workers to think out loud, probing their reasoning with questions, exploring alternatives, and guiding reflection

are all examples of skills that help supervisors better understand and develop YNI workers.

The next section explores these core skills and abilities in more detail and describes how they can be used to surface hidden assumptions and knowledge gaps, assess readiness, and support learning on-the-job.

3.0 GOALS OF EFFECTIVE SUPERVISION

While every worker and situation is different, the following goals can help guide supervisor interactions: building trust, taking the worker’s perspective, and surfacing the shadows. Together, these goals help supervisors better understand workers thinking and support their development over time.

Building trust

The first goal is to build trust. Workers are more likely to ask questions, admit uncertainty, and share their thoughts when they feel supported and trust the people around them. Without trust, workers often remain guarded and hesitant to speak up, allowing important gaps in understanding to remain hidden.

Building trust begins with everyday interactions. Supervisors can lead by example, starting with consistently following safety practices. They can openly discuss past events and lessons learned, acknowledge when they do not have all the answers, and demonstrate a willingness to learn from others. Promoting open communication and practicing active listening signals they value others’ perspectives and feedback. These behaviors reinforce important organizational concepts, such as learning being a continuous activity and uncertainty being sometimes unavoidable. Through this, YNI workers realize that asking questions and raising concerns is both expected and encouraged. These are the tenets of creating a workplace where everyone feels psychologically safe⁸.

Taking the worker’s perspective

Building trust is much easier when supervisors can understand the job from the worker’s point of view. YNI workers do not see the task, process, equipment, and work environment in the same way as experienced workers do. They notice different things and interpret information differently, which can make them susceptible to risks that more experienced workers readily recognize. Effective supervisors recognize this and proactively try to understand how workers are thinking about their work.

Put it into practice



Watch the Worker's Perspective video:

Taking a YNI workers perspective can be difficult and not for a lack of trying. Supervisors and trainers may be years removed from their first days on the job, and the work itself may have changed considerably since they were a novice. As a result, it is difficult to do this successfully without engaging with the worker directly. Curiosity plays an important role here, along with the questioning techniques described in the next section. These strategies can help uncover what a worker notices in a situation, what assumptions they may be making, and which risks they recognize or overlook.

Surfacing the shadows

The shadows are the hidden assumptions and gaps in knowledge that often influence worker performance. They are invisible during routine work and may only become apparent when something unexpected happens. As a supervisor and trainer, one of your primary objectives is to surface these shadows as much as possible before they contribute to mistakes or incidents. The mindsets and goals discussed to this point all support this objective.

Many of the supervisory challenges described at the beginning of this guide stem from the shadows that have not yet been surfaced. The next section introduces practical tools and strategies that supervisors can use to build trust, understand workers' thinking, and surface the shadows before they lead to problems.

4.0 TOOLS & STRATEGIES

Up to this point, we have focused on how to think about supervising YNI workers: why competence can be difficult to judge, how trainer mindsets shape learning opportunities, the importance of building trust and taking the worker’s perspective, and why hidden assumptions matter. But understanding these ideas and applying them on-the-job are two different things.

This section focuses on practical tools supervisors can use during everyday interactions to better understand how workers are thinking, where gaps may exist, and how to support development over time. These tools are not formal tests or additional paperwork. They are small adjustments to normal conversations and training moments that help make worker understanding more visible.

This section focuses on two complementary goals:

- Make your thinking visible. Share your reasoning, lessons learned, patterns, and boundary conditions that your experience has taught you.
- Make their thinking visible. Explore how workers understand the job, what assumptions they are making, and how their reasoning changes when conditions change.

Tools such as storytelling, walkthroughs, think-alouds, diagnostic questions, hypotheticals, eliciting stories, and feedback can be incorporated into interactions already happening on the job. They will help you assess readiness, surface shadows, and support YNI workers.

Put it into practice

Want to put these ideas into practice right away? The accompanying Field Guides provide quick, practical approaches for using storytelling, eliciting worker stories, surfacing shadows, and providing feedback.

Table 3.

Make Your Thinking Visible	Make Their Thinking Visible
Explain your reasoning and the why behind the work	Ask workers to explain their reasoning
Share experiences and lessons learned	Surface assumptions and misunderstandings
Discuss cues, warning signs, and boundary conditions	Probe understanding with questions
Describe failure modes and changing conditions	Explore how thinking changes under new conditions

Making your thinking visible

Many training interactions focus on what to do, and procedures are often built around those actions. Making your thinking visible adds the why.

Procedures remain essential for ensuring consistency and safe operations, but they cannot fully capture the complexity of real-world work. As one experienced trainer put it, *“Procedures aren’t real.”* They describe how work is expected to be done, but they cannot account for every variation or changing condition. Helping workers understand the intent and reasoning behind a procedure better prepares them to recognize when conditions no longer match what is expected.

Experienced workers often navigate these situations using tacit knowledge developed through experience: recognizing subtle warning signs, knowing which cues matter most, seeing patterns, and anticipating what might happen next. Because this knowledge becomes second nature, supervisors may not realize how much of their reasoning is

Making thinking visible

Experienced supervisors and YNI workers do not see the job in the same way. Experienced workers draw on accumulated knowledge to recognize important cues, interpret what they mean, and anticipate problems. Much of this thinking is tacit and invisible to others, unless it is deliberately brought into the conversation. Similarly, watching a worker perform a task does not reveal everything about their understanding.

invisible to someone still learning. While demonstrating a task or discussing a procedure, explain what you are noticing, why a step matters, what risks it controls, and what would cause you to change your approach.

Storytelling: Sharing Your Experience & Lessons Learned

Stories are one practical way to make your experience visible. Procedures describe how work is expected to happen, but stories capture what actually happened when context, uncertainty, competing priorities, and complexity came into play. A good story lets workers learn vicariously from someone else’s experience: what they noticed, how they interpreted the situation, how their understanding changes, and what they learned.

Stories are especially valuable for YNI workers who have not yet accumulated many experiences on their own. A story about a near miss, equipment problem, unexpected condition, or difficult decision can expose workers to important

failure modes and lessons without requiring them to personally experience every situation.

Not every story is equally useful for learning. The strongest stories communicate a clear lesson or insight that others can apply to their

own work, and they are specific enough to make that lesson concrete. General cautions and warnings are often less effective than concrete examples. When sharing a story consider the following dimensions.

Table 4.

Story Elements	What to Share
Situation	What was happening and what initially appeared normal?
Challenge	What made the situation difficult, unusual, or uncertain?
What you noticed	What cues, warning signs, or changes caught your attention?
What you thought	How did you interpret the situation? What assumptions or options were you considering?
What happened	What action did you take and what was the outcome?
The lesson	What did you learn, and how has it changed the way you approach similar situations?

Share enough context and reasoning for workers to understand why the experience mattered and what they can carry forward.

Put it into practice

See the Using Storytelling to Build Competence Field Guide for a quick approach to choosing, structuring, and sharing stories on-the-job

Practice: Think about a task or procedure you teach often. What about this work that may not be obvious from the procedure? Consider why these steps are important and common failure modes. What would happen if aspects of the situation changed?

Next, think of an experience that could bring one of those lessons to life. This may be a memorable event, a near miss, or an unexpected problem you’ve experienced.

Share this with a YNI worker. Ask them, “What do you think the takeaway from this story is?” Their answer can reveal what resonated with them. Did they interpret the story as you intended? Additional discussion may be helpful.

Make their thinking visible

Workers bring their own past experiences to everything they do, which drives how they interpret situations and the assumptions they (sometimes unknowingly) make. It’s not uncommon for two workers to do the same task for very different reasons, and those differences remain hidden unless they are explored.

Supervisors need opportunities to see the worker’s thinking. Sometimes it is necessary to make such opportunities, so you can gain insight into what they notice, what they expect, how they interpret information, and where their understanding is limited.

Everyday training interactions are great opportunities. Ask workers to explain their thinking while performing a task, describe a process in their own words, or work though how they would respond if conditions changed. The goal is to reveal how they understand the job and identify opportunities for improvement.

Practical ways to make worker thinking visible

Below are techniques that can be incorporated into everyday work.

Task Walkthroughs: Walk through a task step by step and ask the worker to explain what they are doing and why, or have the worker lead the walkthrough while you ask questions. This works best when they think aloud.

Think-Aloud Exercises: While performing a task, workers are encouraged to verbalize their thought process. This gives the supervisor insight into what they are noticing (and what they fail to notice) and what goes into their decisions.

Teach-Backs: After discussing a task or procedure, ask the worker to explain it back in their own words. Pay attention to how they interpreted the information and what details they may have misunderstood or omitted.

Whiteboard Sessions: For complex processes, it can be helpful to have workers draw the process, equipment, or system and explain how it works. As they do so, ask them questions about the system interactions, decision points, risks, and what normal vs. abnormal looks like.

Eliciting Stories: Ask workers to describe experiences they have had and use follow-up questions to explore what they noticed, assumed, decided, and learned.

Put it into practice

See the Eliciting Stories to Develop Worker Thinking and Surfacing the Shadows Field Guides for ready-to-implement approaches you can use.

All of these can be done on the job with experienced workers they know and trust. The closer these can be employed in the worker's natural setting, the better. Working with real equipment on real tasks can reveal things that might not show up in the classroom. The objective remains the same: make the workers thinking visible so you

can better surface the shadows and identify opportunities for coaching and development.

Surfacing the shadows

Good questions are one of the most useful tools you have for uncovering assumptions and gaps in understanding. The goal is to investigate how they are making sense of the situation.

- Reveal what they are thinking. Encourage workers to think aloud. Questions such as “Walk me through your thinking?”, “What are you looking for?”, or “Explain your reasoning behind that action.” Help make their current understanding visible.
- Explore why they think that way. Once a worker explains what they are thinking, dig deeper. Try asking “What made you think that?” “What were you expecting?” “What else could explain this?” Stay curious rather than judgmental. If the worker makes an error, try to link it to a specific misunderstanding or gap in experience. Also consider whether procedures, equipment, communication, or the surrounding work environment may be contributing to the problem. You will not know what needs to change until you investigate.
- Test what happens if conditions change. Expertise requires adaptability. After a worker explains their reasoning, introduce a realistic change by asking “What if...?” For example, “What if the pressure continued to increase?” “What if that alarm never came in?” “What if production wanted you to continue?” Changing one condition helps reveal whether the worker understands the principles behind the task or is relying on an approach that only works in one situation.

These steps help reveal what they know, explore how they reason and test whether their understanding adapts.

Diagnostic Questions

Diagnostic questions are especially useful when a worker's performance, decision, or explanation raises a concern. Instead of immediately correcting the worker, you can use that moment to investigate.

Many supervisors naturally ask “Why?” in this situation, but it sometimes produces defensiveness and short, incomplete responses. More fruitful questions encourage workers to explain their thinking in greater detail. Questions like, “Walk me through your thinking?”, “What led you to that conclusion?”, and “What were your concerns?” can reveal how the worker is making sense of the situation. Other diagnostic questions that can probe different areas of understanding include:

- What first caught your attention?
- What are you paying attention to right now?
- What information are you relying on?
- What risks are present?
- What concerns you most about this?
- What other possibilities did you consider?
- What would tell you that your current explanation is wrong?
- How would you know if the conditions changed?

Hypothetical questions are extremely useful because they introduce a change to the situation and ask workers to reason through the consequences⁹. They are best used to address a specific task or process, such as “What would you do if this temperature suddenly increased?”, “What if this piece of equipment was unavailable?”, or “What would make you stop the job?” These questions can expose hidden assumptions and gaps in their understanding, including in situations the worker has never experienced.

Productive questions also can guide learning when a worker is struggling. It can be helpful to guide the worker toward discovering the answers themselves. The goal is to encourage deeper thinking, strengthen problem-solving skills, and allow the worker to make insights. Oftentimes, the worker may need a hint or two to get started. Helpful hints support the workers' reasoning process without simply providing the solution, such as:

- What could be causing this issue?
- What possibilities can you rule out?
- What evidence supports that?
- Could anything be giving you a false indication?
- Are there resources available that could help you manage this?
- Is there a way to stabilize the situation while you gather more information?

These questions encourage workers to slow down, consider alternatives, evaluate the evidence available, and test their assumptions. Keep the interaction focused on understanding instead of evaluation and avoid leading workers toward the answer or correcting them before you understand what they are saying. The objective is to better understand how workers think through unfamiliar situations, and where to best help them out.

Put it into practice

See the Surfacing the Shadows Field Guide for a three-step approach to think-alouds, questions, and hypotheticals you can use during walkthroughs and other training activities.

Stopping work example

A worker stops a task because an instrument reading is unusual. Review how different training approaches lead to different ends.

Table 5.

Traditional Approach	Understanding & Exploring the Why
Supervisor: Why did you stop?	Supervisor: What about the reading concerned you?
Worker: The reading looked wrong.	Worker: I thought it meant we were exceeding the limit.
Supervisor: That instrument does that all the time. Ignore it and keep going	Supervisor: What limit were you worried about?
	Worker: The pressure limit.
	Supervisor: What happens if that exceeds the limit?

In the example above, the worker was being safety-conscious. The supervisor on the right side is exploring the worker’s understanding and trying to reveal what drove them to take that action. Notice how they are framing to learn more about their concerns and posing hypothetical questions to further unpack their thinking.

Providing effective feedback

Providing feedback is a key opportunity to strengthen a worker’s understanding. Effective feedback does more than tell workers whether they were right or wrong. It helps them understand why an outcome occurred and prepare for future situations.

Focus on the process, not just the outcomes

Regardless of the outcome, feedback is most useful when it addresses how the worker thought about the situation. YNI workers may make the right decision for the wrong reasons, or the wrong decision despite noticing the critical cues. Unpacking the worker’s thinking process will open the door to address the root cause of an issue rather than only focusing on the outcome.

Feedback can also reinforce sound reasoning. Instead of saying “good job,” identify what the worker did well and why it mattered. Move beyond actions and outcomes to discuss how the worker made sense of the situation. These conversations help workers develop stronger sensemaking skills¹⁰.

Specific feedback helps workers recognize what good performance looks like so they can repeat those approaches in the future.

Strengthen their understanding

Effective feedback helps workers see the cause-and-effect relationships behind the work, such as why certain cues matter, why decisions work (or fail), and how conditions influence outcomes.

For example, if a YNI worker walks through a dangerous work zone without recognizing the risk, simply telling them to “be more careful” may correct the behavior without addressing the underlying issue. Instead identify the warning signs they missed, why they mattered, and how to recognize similar hazards in the future.

Promote reflection & active learning

The best feedback also helps workers learn to evaluate their own performance. Instead of breaking everything down for them, you can ask them to reflect on what they noticed, what surprised them, and what they think they did well/what they would do differently next time. This will help workers become more curious about their performance and less dependent on external feedback.

The goal is to help workers develop the habit of learning from their experiences, even when you are not present to help them find the answer. Over time, this will instill confidence in the worker.

Prepare workers for the next situation

Start with the specific conditions, cues, decisions, and outcomes of the current experience, then ask how the situation might change if conditions were different. This helps workers recognize which lessons carry forward, which may need to change, and ultimately builds adaptability.

Put it into practice

See the Providing Effective Feedback Field Guide for a quick approach to feedback that strengthens reasoning, understanding, reflection, and preparation for future situations.

5.0 KEY TAKEAWAYS & OUTCOMES

This guide emphasizes that competence is a complex and evolving capability, and that YNI workers are still developing the appropriate understanding and decision-making abilities that support competent performance. Competence develops through a variety of factors: experience, exposure to different situations, learning from successes and failures, and reflection. As workers develop more sophisticated mental models they can make better make informed decisions in both routine and abnormal situations that may be unfamiliar to them. For supervisors, this stresses the importance of looking beyond observable performance and finding ways to better understand how workers think about the job.

The concepts and tools presented in this guide are intended to complement the supervisory practices already taking place in day-to-day work. They offer small adjustments in everyday interactions that help make worker understanding more visible. By building trust, taking the worker’s perspective, surfacing the shadows, and discussing the reasoning behind work, supervisors can gain a better understanding of the worker’s capabilities and weaknesses so they can provide more targeted feedback.

Key takeaways

- Competence is more than completing a task successfully
- YNI workers are still developing mental models and sensemaking skills needed to safely manage complex problems
- Hidden assumptions, misconceptions, and gaps in knowledge often remain invisible unless supervisory actively look for them
- Curiosity, problem-solving, and teaching-oriented mindsets create opportunities for YNI workers to learn and develop their understanding and skills
- Diagnostic questions, stories, walkthroughs, and targeted feedback can all help to explain and elicit reasoning

Expected outcomes

Over time, these approaches can help supervisors better recognize:

- Where assumptions and knowledge gaps still exist
- Where additional training or support is needed
- Where workers are improving and gaining confidence
- When a worker is ready for greater responsibility and independence

When these are applied consistently, these approaches can help organizations build a more resilient workforce. One that treats mistakes as learning opportunities for everyone, leading to more openness and psychological safety. As a result, individuals share knowledge more openly and they develop stronger individual and team skills. In the end, everyone benefits as resilience and safety are strengthened.

KEY WORD GLOSSARY

Competence. The ability to successfully perform work by applying knowledge, skills, experience, judgment, and adaptability to changing situations.

Curiosity. A mindset characterized by asking questions and seeking to understand how and why something happened.

Decision-Making. The ability to size up a situation and act quickly based on past experience and pattern recognition.

Hypotheticals. Questions that explore "what if" situations to help workers think through unfamiliar conditions, potential risks, and alternative actions. They are helpful to understand a worker's reasoning and reveal priorities and knowledge gaps.

Mental Models. A person's internal understanding of how a system or process works. Mental models influence what people notice, expect, and do.

Mindsets. Underlying beliefs and assumptions that influence how people interpret situations and approach learning and training.

Perspective Taking. The ability to understand a situation from another person's point of view.

Psychological Safety. A work environment where people feel comfortable asking questions, admitting uncertainty, sharing concerns, and speaking up without fear of consequences.

Resilience. The ability to adapt and recover effectively when faced with unexpected events and disruptions.

Sensemaking. The continuous process of constructing meaning to understand what is happening in a complex situation.

Shadows. The hidden assumptions, misunderstandings, gaps in knowledge, and incomplete mental models that influence worker performance but are not immediately visible.

Storytelling. The sharing of experiences and lessons learned to communicate context and practical knowledge that may not be captured in procedures.

Tacit Knowledge. Knowledge gained through experience that is often difficult to write down or explain explicitly, such as recognizing subtle cues or anticipating problems.

Trust. Confidence that another person is competent and reliable. Trust supports open communication and collaboration.

Worker Readiness. The extent to which a worker has the knowledge, skills, and abilities needed to perform a task safely and effectively.

Young, New, and Inexperienced (YNI) Worker. A worker who is early in their career, new to a job, role, task, or work environment, and still developing the experience and understanding needed to perform independently.

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