

Failure to Identify the Hazard



Contributed by: Hayden Greenshields

Can you Imagine that'

Imagine a tradesperson working on an international mega-project in Western Canada. They are *competent* and *qualified* to perform their task but they still become anxious about what could be discovered if that piece of paper was obtained for 'evidence'.

Now visualize that the tradesperson you imagined is unable to read or write and that piece of paper could be used as 'evidence' which could implicate that individual's involvement in an accident.

According to the OECD and Statistics Canada, 42% of Canadians in the labour market (aged 16 to 65) have literacy skills at the lowest two levels on the five-level International Adult Literacy Survey (IALS) Scale^{[\[1\]](#)} .

Now, imagine you are a worker with low literacy skills, thrust into week-long safety orientations with power point presentations designed for literacy skill comprehension ranging from level four or five and a quick glossing of how to perform a Hazard Assessment Tool. That piece of paper *assumes* the user is literate, knowledgeable and rational. That piece of paper also assumes that the user can identify all known and foreseeable hazards in the workplace, articulate it on the

piece of paper, and also conjure up control measures of which you, the worker, have complete control of.

Can you imagine that'

Hazard Assessment, Elimination and Control

Identifying hazards, assessing them and controlling them are the foundations for any Safety Management System. All jurisdictions enact legislation surrounding hazard identification, assessment, and control with regards to workplace safety. Some jurisdictions are prescriptive and outline that they must be in a written form and that a date must be recorded whenever it is prepared or revised. Some even state that the employer must involve affected workers in the hazard assessment and control process. Furthermore, some employers even require their employees to record their work tasks, associated hazard controls in the hazard assessment report or commonly referred to as a Field-Level Hazard Assessment, Field-Level Risk Assessment, Take 5, STARRT Card or under the acronyms FLHA or FLRA.

Hazard Assessment Tool or Due Diligence Tool'

I often read accident reports in which the pre-condition for the incident was a failure to identify the hazard. This immediate/direct cause description has become popular in accident/incident investigation models, and as a pre-condition, has become a powerful explanation for why an incident occurred. If a worker was involved in an accident, the investigator would collect the Field-Level Hazard Assessment Tool, as evidence, and upon review of the document, find out that the worker did not explicitly record the potential hazard and applicable control. Now comes the Eureka moment. *We got you!* The 'causal connection' has surfaced and the Supervisor or Manager has sufficient 'evidence' to discipline or remove the worker from the worksite ignoring the other possible 'causes' to the accident.

Rational Choice versus Perceptual Cycle

Proponents of the red herring^[2] approach to accident investigations review the Field-Level Hazard Assessment and come to a conclusion prior to understanding how sensemaking works. *Rational choice theory* assumes that the worker has full or perfect information prior to the incident occurring. All of this *full* or *perfect* information should be transcribed in the FLHA.

This is a fallacy.

We are constantly making assessments about our environment and continually updating our current understanding of the world. Sometimes these assessments of the world are correct and other times they are based on incomplete information. *The Perceptual Cycle*, first propagated in the 1970's by cognitive psychologist Ulrich Neisser, lays the idea between cyclical coupling of action and assessment. The situation updates our current understanding, then directs our actions in a cyclical manner.

Although the worker was unable to identify, control and record known and foreseeable hazards through the hazard assessment tool, this does not mean that the worker was not aware of it cognitively. It is unrealistic for an individual to focus on a task and simultaneously transcribe new stimulus whenever something changes in the environment. Imagine driving a car. A person would have to pull over constantly to write down any new stimulus that could pose a risk to the driver. The Perceptual Cycle allows us to do this constantly without having to carry the stack of papers or having to borrow a pen or pencil. The incomplete information from the FLHA's focuses attention on the one 'clue' which in turn blinds the investigator from every other potential clue to the investigation.

The Contrarian

Too often, I have been on worksites when an accident has occurred and the managers or supervisors are in a hurry to remove the worker from site because they failed to identify the hazard in the Field-Level Hazard Assessment. This assumption is misleading and damages not only the reputation of the worker but the quality of the accident investigation. Instead of looking for red herrings in the hazard assessment document, recognize that not all workers can identify and articulate hazards in their workplace. Hazard recognition is not common knowledge. It is based on an individual's experience, knowledge, and training. Coupled with the fact that a large percentage of working Canadians have low literacy skills, it is no wonder why Field-Level Hazard Assessment critics (*usually safety people*) criticize workers FLHA with frustration. *We gave them a power-point on the FLHA and they still can't fill it out right or YOU are SUPPOSED to identify all the HAZARDS! You missed tripping hazard from the electrical cord on the ground!*

In any type of conversation, you can either be a Dictator, Slave or Negotiator and in these conversations ' the worker is not in a position to negotiate. They could respond by saying that they are using the electrical cord for the grinder and listed electrocution as a hazard in the Field-Level Hazard Assessment. They could also include that the control measures are to ensure that the electrical cord being used has a built-in ground fault circuit interrupter, a locking socket to securely connect the cord to the grinder, has the appropriate amperage with consideration of amperage droppage, is double-insulated, has a CSA marking (Canadian Standards Association) on the cord and is inspected prior to use. Perhaps the worker was aware of the risk of tripping on the cord and registered this hazard and control measure in their mind but were cognitively fixated at the higher risk of being electrocuted and made it a conscious effort to articulate the control measure in the Field-Level Hazard Assessment.

Don't throw the Baby out with the Bath Water

Utilizing a Field-Level Hazard Assessment Tool for your company is laudable. There are many companies out there that are not even close to rolling out a Field-Level Hazard Assessment Tool to their workers. With that being said, be mindful that not all workers will have the technical language to articulate the hazards and controls in the FLHA. Also, workers with low literacy skills will typically keep this information to themselves. Subtle cues that they are unable to read and write can manifest by withdrawing from opportunities to read Toolbox Talks or quickly scanning through other workers Field-Level Hazard Assessments. Comments like 'I forgot my glasses this morning' could be a sign that the worker is unable to read or write safety related documentation.

I am a supporter of *collective* Field-Level Hazard Assessments. Where all the workers involved in a particular task gather together and verbalize what the hazards are and the control measures. The diversity, like a democracy, allows for different perspectives, viewpoints and a volleying of ideas back and forth, which hazard and control is valid versus what can be considered a low-hanging fruit. This type of collective Field-Level Hazard Assessment allows the worker with low literacy skills the ability to vocalize their unique understanding of the work and its hazards and control measures in a way that they do not feel inferior by struggling through an individually-driven Field-Level Hazard Assessment. The other positive is that if there is an accident involved in the job, the collective Field-Level Hazard Assessment will detail what the tasks were and what hazards and control measures were included from input from all the affected workers – not just an individual. If the agreed upon hazards and controls were inadequate or not considered by the investigator; perhaps the investigator will look at the training, resources, maintenance, supervision or the organization itself.

There is a real need for the Safety Management System to be built on solid foundations of Hazard Identification, Assessment, and Control. The Field-Level Hazard Assessment is one tool that can strengthen those foundations but like any tool, they should be used for what they are intended for. Next time when you see a poorly written Field-Level Hazard Assessment in the workplace, don't reflect what they should or should not have included – this is counterfactual. Rather put yourself in their 'tunnel' and seek the point of view of the worker inside the situation.

^[1] Source: OECD and Statistics Canada. *Learning a Living*, p.50. Results are for the Prose Scale, one of three measures of literacy used in the International Adult Literacy Survey.

^[2] A red herring is something that misleads the reader or audience towards a false conclusion.

About the author:

Hayden Greenshields is a partner at Free Spirit Ventures Inc. in Prince George, British Columbia. He is a Consulting Environmental, Health and Safety Professional with over 12 years of experience as a safety professional. He also provides program design and instructional support to the University of Northern British Columbia's Occupational Health & Safety Practitioner Certificate Program and specializes in Human Factors & System Safety. He can be reached at hayden@safetypays.ca or visit www.safetypays.ca for more information.