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Five Safety Culture Improvement Strategies

Dr. Mark Fleming

Professor of Psychology

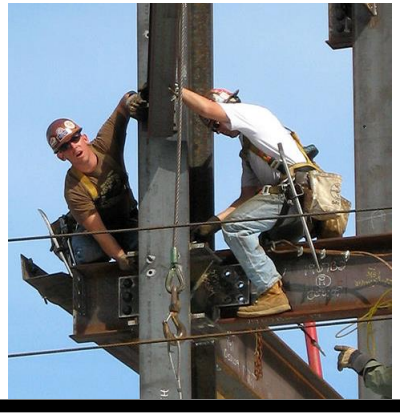
Saint Mary's University

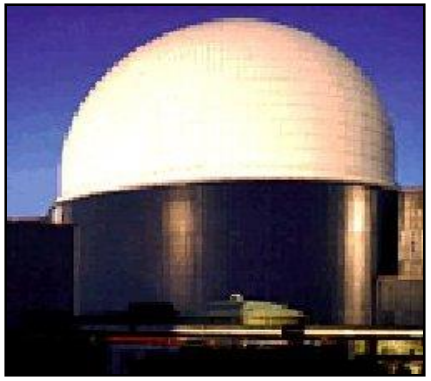
mark.fleming@smu.ca

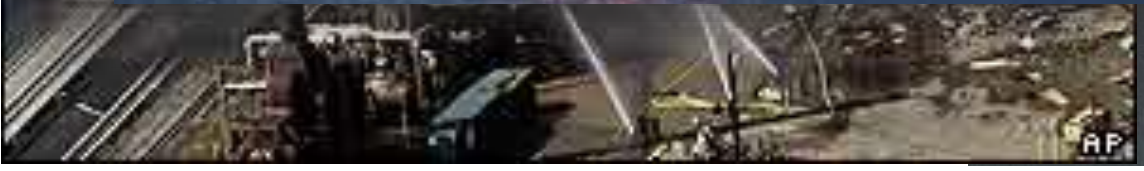
Outline

- Background
- Safety culture
  - Models and dimensions
- Improvement strategies
- Conclusions

Cross industry collaboration



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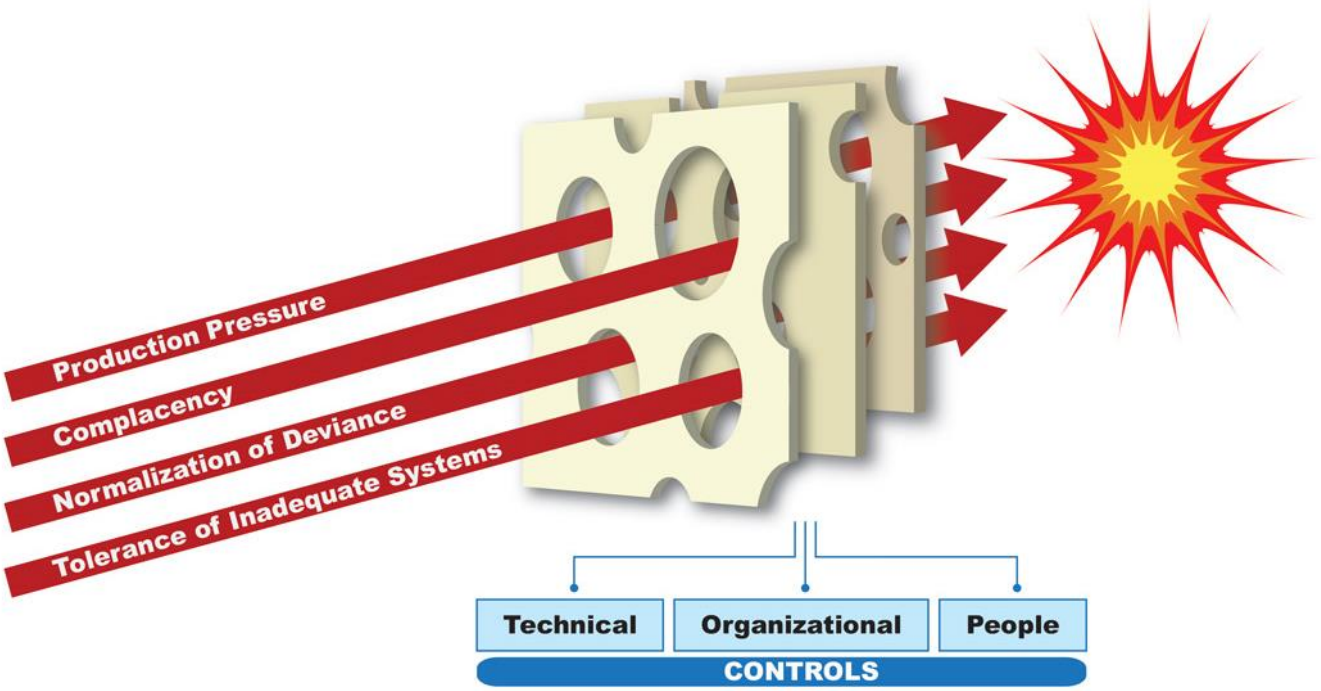
Safety culture threats



Graphic courtesy of the NEB

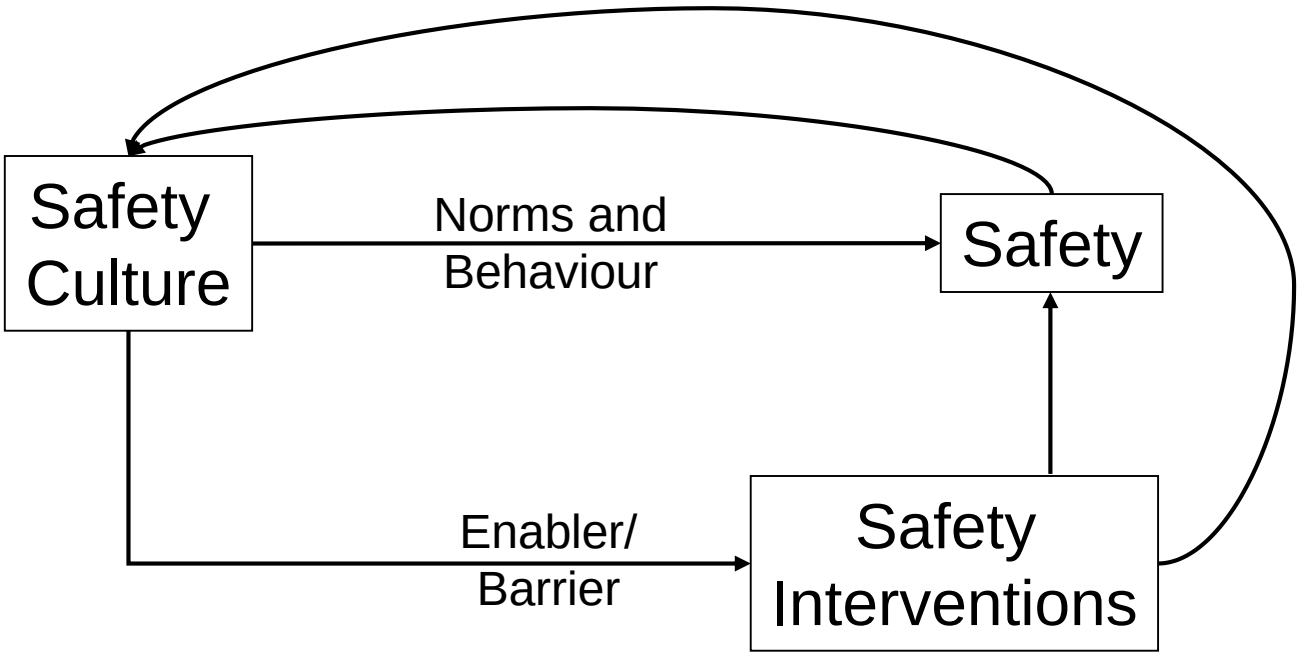
Safety Culture Definition

"Safety culture is the product of individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of an organization's health and safety programmes." (Advisory Committee for Safety in Nuclear Installations, 1993; p. 23)

Failure resistant organisation

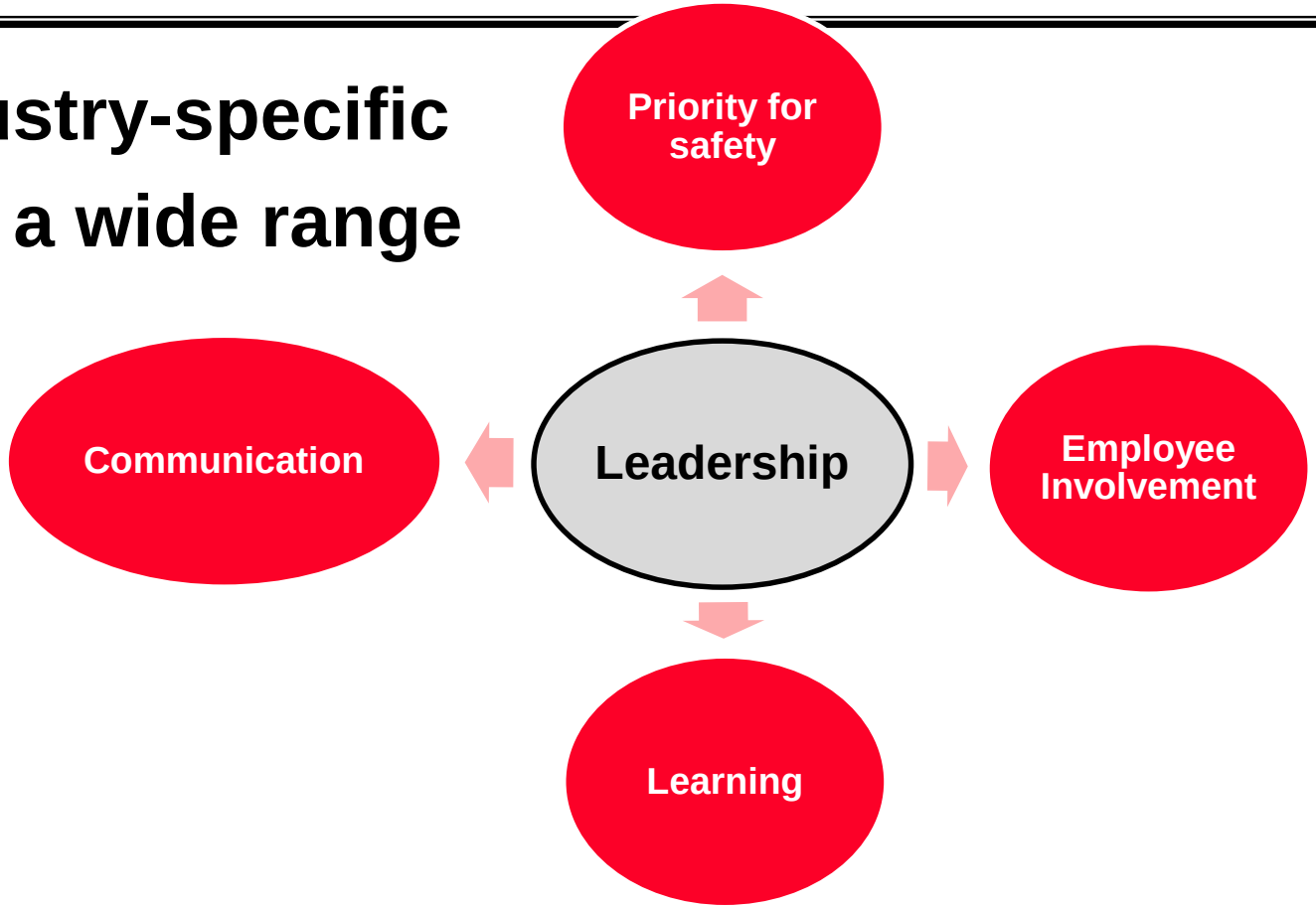
- Preoccupation with failure
- Employee report errors and problems
- Develop deep understanding of problems and issues
- Decentralised decision making
- Seek employee concerns

Culture and Safety



Model of Safety Culture

- Usually industry-specific
- Can include a wide range of factors



Five improvement strategies

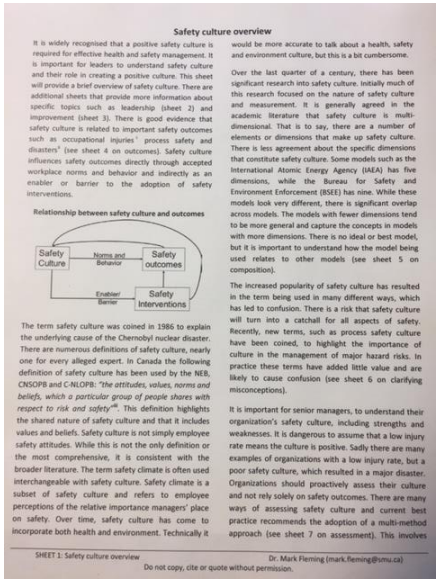
1. **Leadership**
   Safety leadership skill development
2. **Priority for safety**
   Worksite visit program
3. **Employee Involvement**
   Employee led safety initiatives to promote intrinsic motivation
4. **Learning**
5. **Communication**

1. Safety leadership skills

- Understand their role in creating and maintaining a positive safety culture
- How to talk to employees about safety
- Able to recognise safe and unsafe work practices
- Understand the complex nature of accident causation
- Appreciate their leadership strengths and weaknesses

1. Safety culture education

- **Safety culture sheets**



Safety culture overview

It is widely recognised that a positive safety culture is required for effective health and safety management. It is important for leaders to understand safety culture and their role in creating a positive culture. This sheet will provide a brief overview of safety culture. There are additional sheets that provide more information about specific topics such as leadership (sheet 2) and improvement (sheet 3). There is good evidence that safety culture is related to important safety outcomes such as occupational injuries[1] process safety and disasters[2] (see sheet 4 on outcomes). Safety culture influences safety outcomes directly through accepted workplace norms and behavior and indirectly as an enabler or barrier to the adoption of safety interventions.

Relationship between safety culture and outcomes

The term safety culture was coined in 1986 to explain the underlying cause of the Chernobyl nuclear disaster. There are numerous definitions of safety culture, nearly one for every alleged expert. In Canada the following definition of safety culture has been used by the NEB, CNSOPB and C-NLOPB: *"the attitudes, values, norms and beliefs, which a particular group of people shares with respect to risk and safety"*[3]. This definition highlights the shared nature of safety culture and that it includes values and beliefs. Safety culture is not simply employee safety attitudes. While this is not the only definition or the most comprehensive, it is consistent with the broader literature. The term safety climate is often used interchangeable with safety culture. Safety climate is a subset of safety culture and refers to employee perceptions of the relative importance managers' place on safety. Over time, safety culture has come to incorporate both health and environment. Technically it would be more accurate to talk about a health, safety and environment culture, but this is a bit cumbersome.

Over the last quarter of a century, there has been significant research into safety culture. Initially much of this research focused on the nature of safety culture and measurement. It is generally agreed in the academic literature that safety culture is multi-dimensional. That is to say, there are a number of elements or dimensions that make up safety culture. There is less agreement about the specific dimensions that constitute safety culture. Some models such as the International Atomic Energy Agency (IAEA) has five dimensions, while the Bureau for Safety and Environment Enforcement (BSEE) has nine. While these models look very different, there is significant overlap across models. The models with fewer dimensions tend to be more general and capture the concepts in models with more dimensions. There is no ideal or best model, but it is important to understand how the model being used relates to other models (see sheet 5 on composition).

The increased popularity of safety culture has resulted in the term being used in many different ways, which has led to confusion. There is a risk that safety culture will turn into a catchall for all aspects of safety. Recently, new terms, such as process safety culture have been coined, to highlight the importance of culture in the management of major hazard risks. In practice these terms have added little value and are likely to cause confusion (see sheet 6 on clarifying misconceptions).

It is important for senior managers, to understand their organization's safety culture, including strengths and weaknesses. It is dangerous to assume that a low injury rate means the culture is positive. Sadly there are many examples of organizations with a low injury rate, but a poor safety culture, which resulted in a major disaster. Organizations should proactively assess their culture and not rely solely on safety outcomes. There are many ways of assessing safety culture and current best practice recommends the adoption of a multi-method approach (see sheet 7 on assessment). This involves

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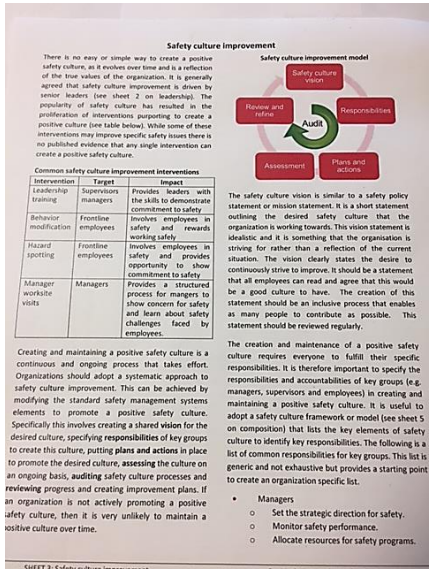


Safety culture improvement

There is no easy or simple way to create a positive safety culture, as it evolves over time and is a reflection of the true values of the organization. It is generally agreed that safety culture improvement is driven by senior leaders (see sheet 2 on leadership). The popularity of safety culture has resulted in the proliferation of interventions purporting to create a positive culture (see table below). While some of these interventions may improve specific safety issues there is no published evidence that any single intervention can create a positive safety culture.

Common safety culture improvement interventions

Intervention	Target	Impact
Leadership training	Supervisors managers	Provides leaders with the skills to demonstrate commitment to safety
Behavior modification	Frontline employees	Involves employees in safety and rewards working safely
Hazard spotting	Frontline employees	Involves employees in safety and provides opportunity to show commitment to safety
Manager worksite visits	Managers	Provides a structured process for mangers to show concern for safety and learn about safety challenges faced by employees.

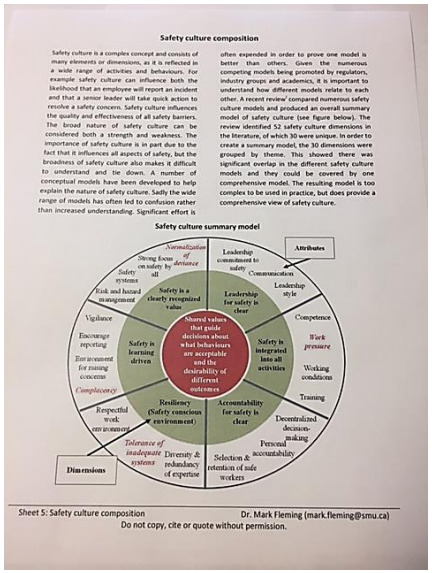
Creating and maintaining a positive safety culture is a continuous and ongoing process that takes effort. Organizations should adopt a systematic approach to safety culture improvement. This can be achieved by *modifying the standard* safety management systems elements to promote a positive safety culture. Specifically this involves creating a shared **vision** for the *desired culture, specifying* **responsibilities** of key groups *to create this culture,* putting **plans and actions** in place *to promote the desired culture,* **assessing** the culture on *an ongoing basis,* **auditing** safety culture processes and **reviewing** progress and creating improvement plans. If an organization is not actively promoting a positive safety culture, *then it is very unlikely to maintain a positive culture over time.*

Safety culture improvement model

The safety culture vision is similar to a safety policy statement or mission statement. It is a short statement outlining the desired safety culture that the organization is working towards. This vision statement is idealistic and it is something that the organisation is striving for rather than a reflection of the current situation. The vision clearly states the desire to continuously strive to improve. It should be a statement that all employees can read and agree that this would be a good culture to have. The creation of this statement should be an inclusive process that enables as many people to contribute as possible. This statement should be reviewed regularly.

The creation and maintenance of a positive safety culture requires everyone to fulfill their specific responsibilities. It is therefore important to specify the responsibilities and accountabilities of key groups (e.g. managers, supervisors and employees) in creating and maintaining a positive safety culture. It is useful to adopt a safety culture framework or model (see sheet 5 on composition) that lists the key elements of safety culture to identify key responsibilities. The following is a list of common responsibilities for key groups. This list is generic and not exhaustive but provides a starting point to create an organization specific list.

- Managers
  - Set the strategic direction for safety.
  - Monitor safety performance.
  - Allocate resources for safety programs.



Safety culture composition

Safety culture is a complex concept and consists of many elements or dimensions, as it is reflected in a wide range of activities and behaviours. For example safety culture can influence both the likelihood that an employee will report an incident and that a senior leader will take quick action to resolve a safety concern. Safety culture influences the quality and effectiveness of all safety barriers. The broad nature of safety culture can be considered both a strength and weakness. The importance of safety culture is in part due to the fact that it influences all aspects of safety, but the broadness of safety culture also makes it difficult to understand and tie down. A number of conceptual models have been developed to help explain the nature of safety culture. Sadly the wide range of models has often led to confusion rather than increased understanding. Significant effort is often expended in order to prove one model is better than others. Given the numerous competing models being promoted by regulators, industry groups and academics, it is important to understand how different models relate to each other. A recent review[4] compared numerous safety culture models and produced an overall summary model of safety culture (see figure below). The review identified 52 safety culture dimensions in the literature, of which 30 were unique. In order to create a summary model, the 30 dimensions were grouped by theme. This showed there was significant overlap in the different safety culture models and they could be covered by one comprehensive model. The resulting model is too complex to be used in practice, but does provide a comprehensive view of safety culture.

Safety culture summary model

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1. Developing leadership skills

- **Multi-method safety leadership development**
  - **Education**
    - Attributes of an effective safety leader
  - **Skills practice**
    - Role play exercises
  - **Mentoring**
    - One on one coaching from more effective safety leader
  - **Goal setting and feedback**
    - Safety leadership targets

2. Priority for safety (worksite visit program)

- **Communicate concern**
  - **Manager needs to demonstrate to employees that they are concerned about their personal safety**
- **Understand worksite conditions**
  - **Need to observe worksite safety conditions, including levels of employee engagement**
- **Capture and share results**
  - **Need a systematic process to capture findings**

3. Employee involvement

- Peer to peer observation
  - Employee's decide the name and key behaviours
- Supported by management
  - Provide training and time to perform observations
- Broad involvement
  - Needs to be attractive to all employees

3. Employee involvement

- Non-work safety behaviour predicts at work intrinsic safety motivation
- Enhance intrinsic safety motivation by:
  - Educating workers about non-work hazards and mitigation strategies
  - Providing resources to promote the adoption of non-work safety practices
  - Not adopting a punitive approach

4. Learning from incidents

- Focus on understanding and learning not on causation
- Adopt a system based investigation process (e.g. learning tree)
- Engage frontline employees in the process as equal partners
- Understand why the failures occurred, other areas of vulnerability and how future failures can be prevented

4. Close call reporting system

- **Design (or revise) a close call reporting system that is:**
  - **Easy to use**
    - Requires minimal effort to make a report
  - **Safe**
    - Employees are confident that the report will not be used to punish themselves or others
  - **Effective**
    - The report will result in meaningful change

5. Communication

- Design safety communication to meet employee needs and expectations.
- Seek critical feedback from employees
- Adopt a marketing strategies to safety communication
- Involve employees and communication specialists in the process
- Allocate adequate resources

Conclusions

- Safety culture is an important determinant of safety performance
- A positive safety culture takes continuous effort, it is a journey not a destination
- There are a wide range of strategies to promote a positive safety culture
- I have shared some strategies that are designed to promote a positive safety culture