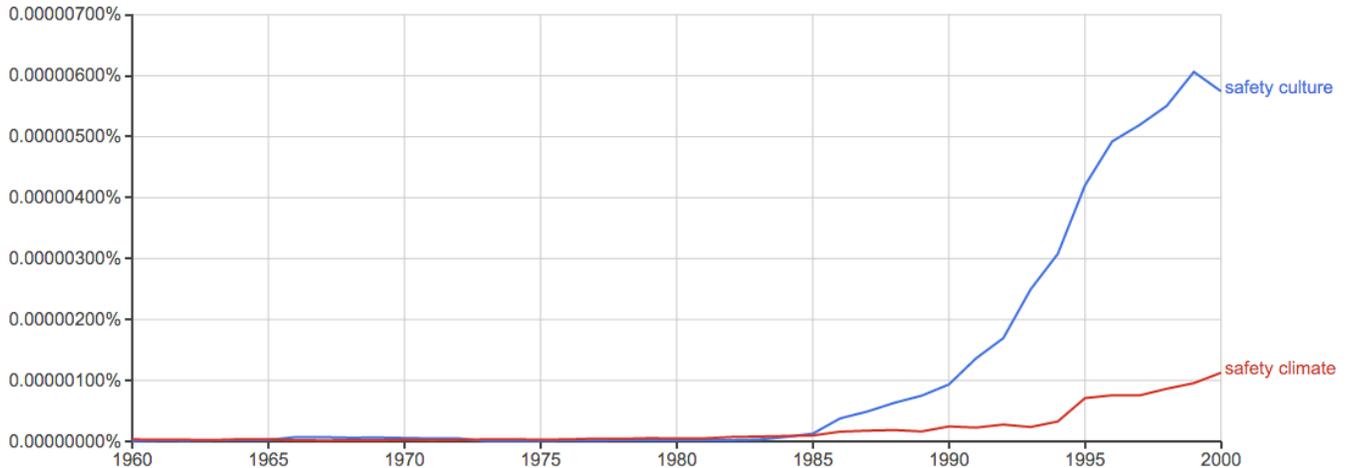


Prepared by Talos Analytics for
Nova Scotia Construction Safety Association

Defining Safety Culture and Climate





Safety Culture

The graph above displays the frequency of the term “safety culture” and “safety climate” being published in the literature between 1960 and 2000. This graph best highlights the onset of safety culture in 1986, the year both the Challenger Space shuttle and Chernobyl disasters occurred. Investigations into the root cause of each of these catastrophic disasters went beyond mechanical or personnel failures but identified a weak safety culture as one of the factors related to both of the incidents (Hecker & Goldenhar, 2014; IAEA, 1986).

Over the decades, there have been many similar yet conflicting definitions of Safety Culture. In a recent construction safety climate and culture workshop hosted by NIOSH and CPWR (2013), construction stakeholders (contractors, employer associations, labor organizations, academics, consultants, and insurance firms) were asked to select a definition that aligns with safety culture within the construction industry. Needless to say, out of a list of ten Safety Culture definitions commonly found in the literature, consensus could not be found on a single definition (see Appendix A). However, from this exercise, a single definition was developed that best-reflects safety culture from a construction industry perspective, while still encompassing the broadly accepted definitions from the literature.

We all need to have a common definition of **Safety Culture** if we ever want to assess and have any meaningful influence.

“Deeply held but often unspoken safety-related beliefs, attitudes, and values that interact with an organization’s systems, practices, people, and leadership to establish norms about how things are done in the organization. Safety culture is a subset of, and clearly influenced by, organizational culture. Organizations often have multiple cultures or subcultures, and this may be particularly true in construction.” (NIOSH/CPWR, 2013, p.14)

This definition encompasses all aspects of safety culture and the complexities involved in understanding it within the context of the organization. Additionally, academics, subject matter experts and stakeholders from the construction industry participated in developing this definition.

Safety Climate

Past research has been criticized for the lack of standardization in the terms Safety Culture and Safety Climate, both of which are often, mistakenly, used interchangeably (Neal & Griffin, 2004). In 1980, Zohar was the first to test a model of safety climate. Zohar's intention was to examine employee perceptions of safety in the workplace, which is often the main indicator of Safety Climate.

Similarly, a definition of **Organizational Safety Climate** was developed from the NIOSH/CPWR workshop. The definition encompasses the broad literature as well as expertise from construction industry stakeholders.

“The shared perceptions of safety policies and procedures by members of an organization at a given point in time, particularly regarding the adequacy of safety and consistency between actual conditions compared to espoused safety policies and procedures.” (NIOSH/CPWR, 2013, p.14)

The group also identified an additional term called **Project Safety Climate**, which is similar to Organizational Safety Climate, but accounts for the variability in construction projects that involve multiple organizations, contractors, managers, and project owners. It recognizes that construction organizations may have a positive Organizational Safety Climate, but factors related to specific project such as project delivery methods, scheduling, and incentives may influence the perceptions of safety. It is important to make the distinction of project safety climate for construction organizations when measuring Safety Climate in a construction organization.

Both Safety Culture and Safety Climate have been related to safety performance and lower accident and injury rates (Christian, Bradley, Wallace, & Burke, 2009).

Appendix A

| Top Safety Culture Definitions (NIOSH/CPWR Safety Culture Report, 2013, p. 13) | Percentage Agree |
|--|------------------|
| Shared values (what is important) and beliefs (how things work) that interact with a company's people, organizational structures and control systems to produce behavioral norms (the way we do things around here). | 30% |
| Safety culture reflects the attitudes, beliefs, perceptions, and values that leadership and employees share in relation to safety. | 29% |
| Safety culture reflects the stakeholders' values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of an organization's health and safety management. | 14% |
| Safety culture is the concept that the organization's beliefs and attitudes, manifested in actions, policies, and procedures, affect its safety performance. | 11% |
| Safety culture reflects the attitudes, beliefs, perceptions, and values that leadership and employees share in relations to safety. [Integrating safety into organizational and cultural operations] | 9% |
| The Safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of an organization's health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures. | 7% |

| Top Safety Climate Definitions (NIOSH/CPWR Safety Culture Report, 2013, p. 13) | Percentage Agree |
|---|------------------|
| Safety Climate is a leading indicator. It reflects how well the espoused safety program is ultimately integrated into the organization to support safe effective practices at the point of operation. | 33% |
| Safety Climate reflects shared perceptions of the relative priority of safety compared to other competing organizational priorities. | 23% |
| The safety climate is the environment in which a company puts its safety culture to work. Like providing the tools and equipment necessary, maybe the resources on our job sites to create that environment in which people are allowed to work safely. | 19% |
| Safety climate is the shared perceptions of organizational members about their work environment and, more precisely, about their organizational safety policies. | 16% |
| Safety climate is a subset of organizational climate that measures through member's perceptions the degree of congruence between an organization's espoused values and policies and enacted practices. | 9% |

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