

# Development and Evaluation of a Logging Safety Training Program

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WESTON 2017



# OSHA<sup>®</sup> FATALFacts

No. 14 – 2016

## Crushed by Carriage during Skyline-Skidding Operation

U.S. Department of Labor

Occupational Safety and Health Administration

[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)



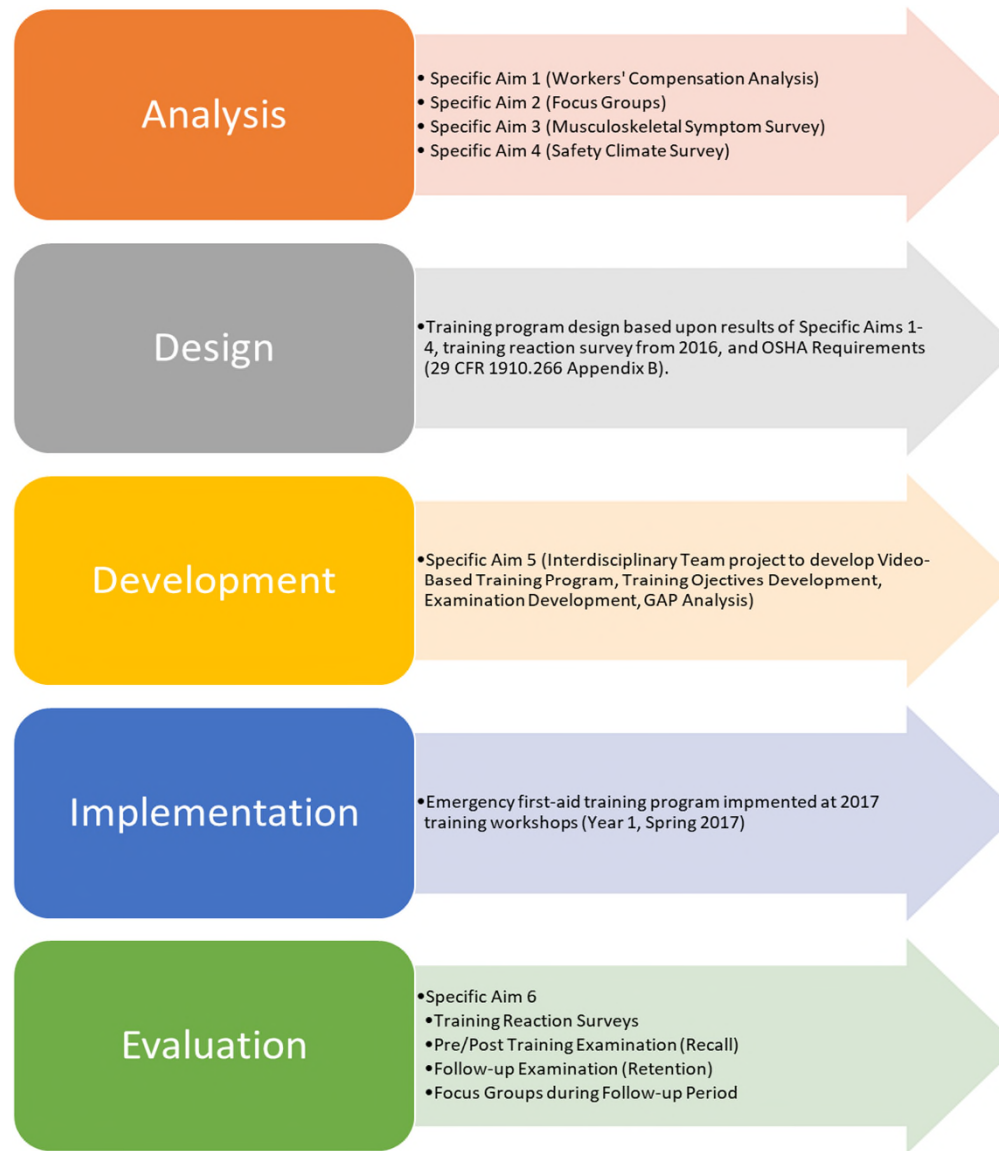







**Occupational Ergonomics and Safety**

# Development of a Training Program

## The Systematic Approach to Training



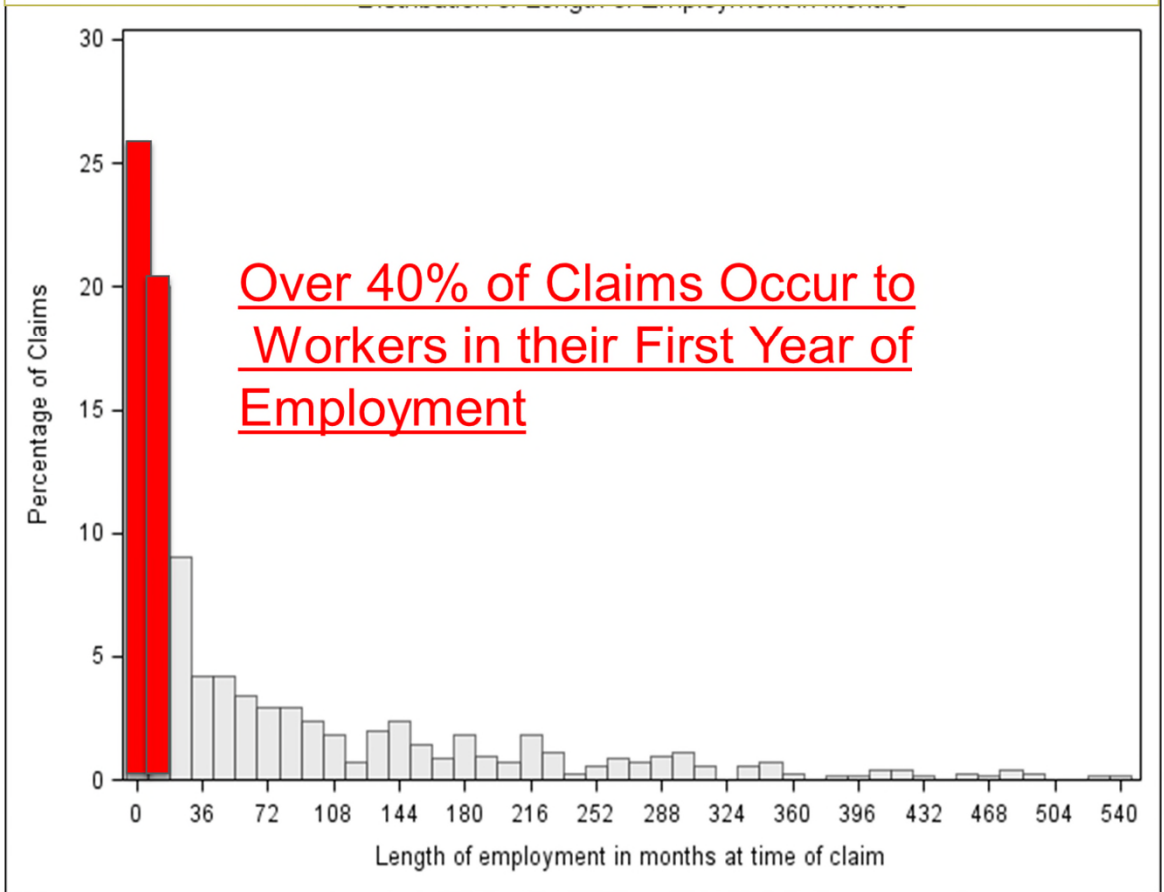
# Injury Analysis

| Workers' Compensation Data   |      |  |      |                      |      |
|--|------|--|------|----------------------|------|
| Job Task   | n    | Incident Type  | %    | Nature of Injury     | %    |
| <br>Sawyer/<br>Hooker | 382  | Struck by  | 51.3 | Sprain/Strain        | 29.6 |
|  |      | Fall   | 19.9 | Contusion/Abrasion   | 20.9 |
|  |      | Overexertion   | 6.0  | Laceration/Puncture  | 16.0 |
|  |      | Other  | 5.2  | Other                | 11.5 |
|  |      | Involuntary Movement   | 4.2  | Fracture/Dislocation | 13.6 |
|  |      | Caught Between   | 5.0  | Multiple Injuries    | 6.0  |
|  |      | Voluntary Movement   | 5.8  | Head Trauma          | 1.8  |
|  |      | Equipment Overturn   | 0.0  | Fatal                | 0.5  |
|  |      | Animal Bite or Sting   | 2.4  |                      |      |
|  |      | Vehicle Collision  | 0.3  |                      |      |
|  |      | <br>Equipment<br>Operator | 179  | Struck by            | 22.4 |
| Fall   | 28.5 |  |      | Contusion/Abrasion   | 17.3 |
| Overexertion   | 11.7 |  |      | Laceration/Puncture  | 11.2 |
| Other  | 12.9 |  |      | Other                | 13.4 |
| Involuntary Movement   | 10.0 |  |      | Fracture/Dislocation | 9.5  |
| Caught Between   | 3.9  |  |      | Multiple Injuries    | 5.0  |
| Voluntary Movement   | 3.9  |  |      | Head Trauma          | 1.7  |
| Equipment Overturn   | 6.2  |  |      | Fatal                | 0.0  |
| Animal Bite or Sting   | 0.0  |  |      |                      |      |
| Vehicle Collision  | 0.6  |  |      |                      |      |
| <br>Truck<br>Driver | 143  |  |      | Struck by            | 19.4 |
|  |      | Fall   | 33.6 | Contusion/Abrasion   | 16.8 |
|  |      | Overexertion   | 21.0 | Laceration/Puncture  | 11.2 |
|  |      | Other  | 12.6 | Other                | 13.3 |
|  |      | Involuntary Movement   | 7.7  | Fracture/Dislocation | 15.4 |
|  |      | Caught Between   | 4.2  | Multiple Injuries    | 0.0  |
|  |      | Voluntary Movement   | 0.0  | Head Trauma          | 0.0  |
|  |      | Equipment Overturn   | 1.4  | Fatal                | 0.7  |
|  |      | Animal Bite or Sting   | 0.0  |                      |      |
|  |      | Vehicle Collision  | 4.2  |                      |      |



# Injury Analysis

## Length of Employment at Time of Injury



# Focus Groups

| Focus Group Ideas  |  |
|--|--|
| Prevention   | Barriers   |
| <ul style="list-style-type: none"> <li>• Change in culture in attitude from the top down</li> <li>• Correct and address dangerous situations when they are observed</li> <li>• Consider using break time to encourage communication Empower workers to speak up during unsafe situations or when they do not know how to safely/properly perform work tasks</li> <li>• Ensure safety is a priority from the top town</li> <li>• Change in land management is providing consistency in safety expectations across worksites</li> <li>• Reduce driver's injuries during stake extension tasks</li> </ul> | <ul style="list-style-type: none"> <li>• Tough and independent work culture</li> <li>• Resistance to change</li> <li>• Lack of leadership</li> <li>• Drug/Alcohol use</li> <li>• Personnel and family issues migrating to job site</li> <li>• Cost and Production-Thin Margins</li> <li>• Cost to implement safety programs</li> <li>• Limited personnel to complete same amount of work</li> <li>• Limited number of workers entering industry</li> <li>• Limited amount of formalized training available for new hires.</li> </ul> |

# Survey data

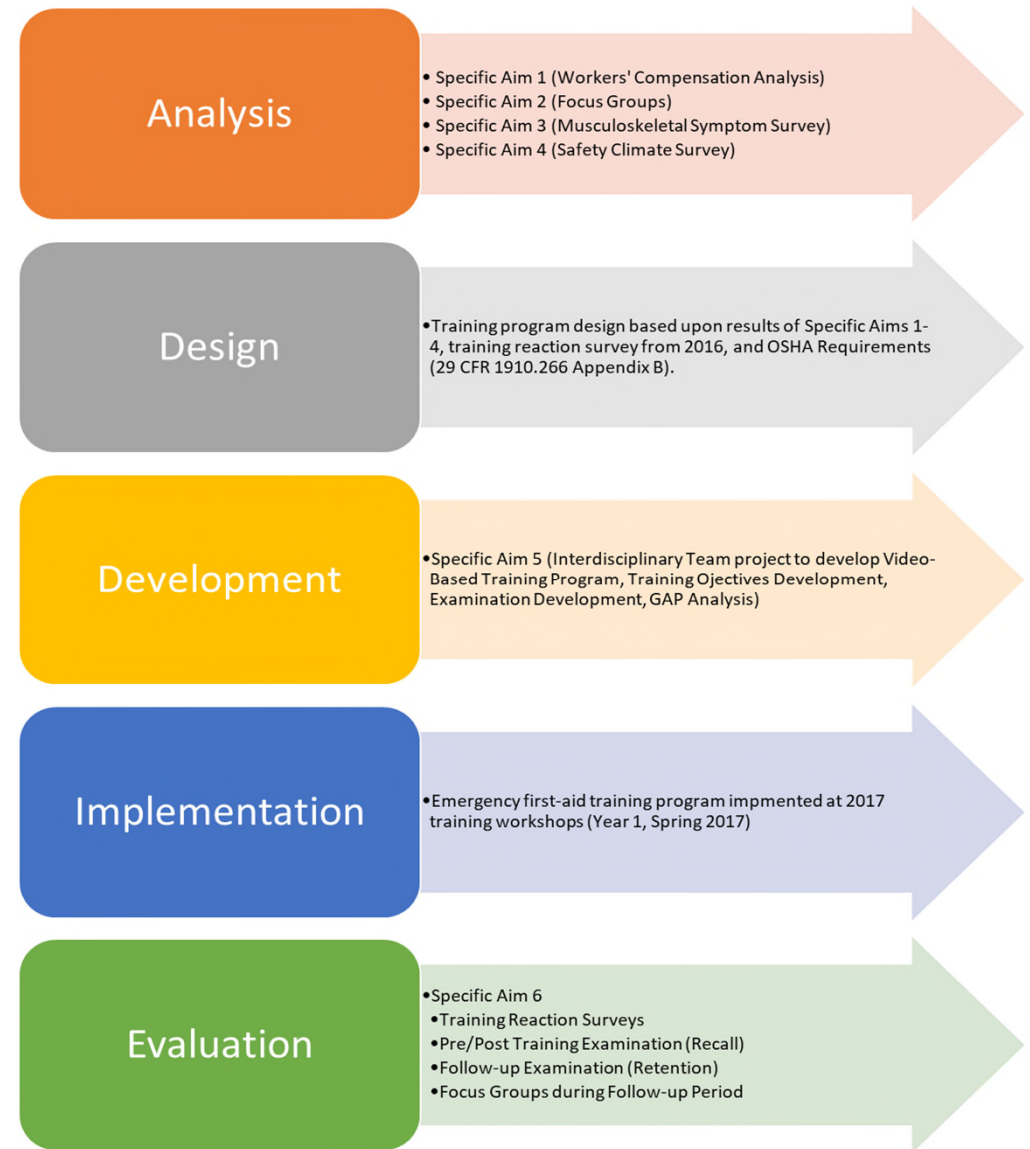
| Injury Questionnaire |            |  |  |   |
|----------------------|------------|--|--|---|
|                      | Body Areas | In the past 12 months have you experienced a job-related, ache, pain, discomfort, or numbness in the following body areas?                             | During the past 12 months have these job-related symptoms caused you to miss work? | During the past 12 months have you seen a physician for these job-related symptoms? (M.D., Osteopath, Chiropractor) |
|                      | Neck       | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Upper Back | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Lower Back | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Shoulder   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Both | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Elbows     | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Both | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Wrist/Hand | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Both | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Hip/Thighs | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Knees      | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
|                      | Feet       | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> Yes <input type="checkbox"/> No                           | <input type="checkbox"/> Yes <input type="checkbox"/> No  |

# Survey data

Safety Climate Dimension Scores and Presence of Musculoskeletal Symptoms



# Training Development



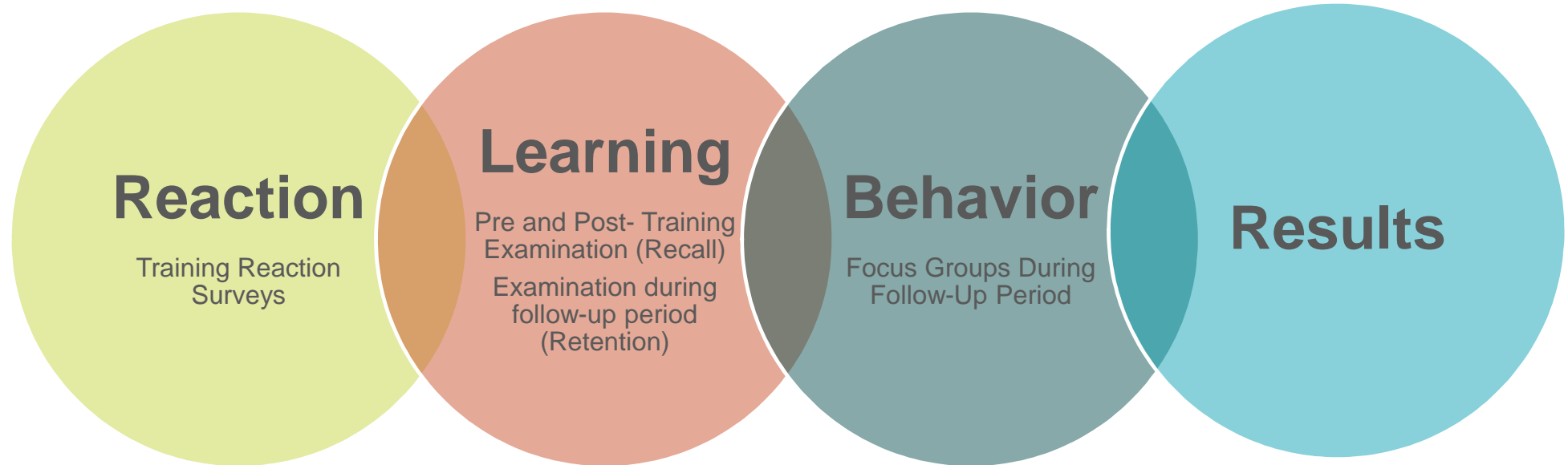




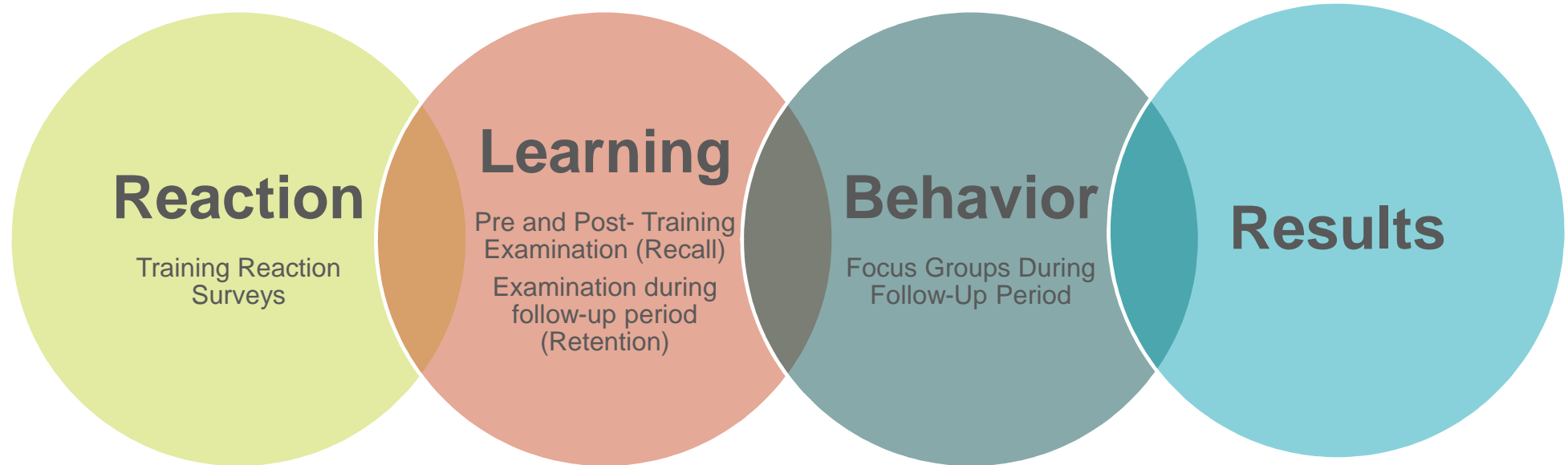




# Follow up/Testing



# Follow up/Testing



# Future Work/Direction



# Thank you



Colorado State University