INCIDENTS – DECISION MAKING IN TEAMS

Dr. Christine Owen
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RESEARCH – LEGACY AND CONTINUITY

2006

2007
Dwyer, Douglas
Hickey
Salter
Owen

2008

2009

2010
Abbassi, Bearman, Bhandari, Brooks Curnin Hamra Owen

2011

2012

2013

2014
Brooks Bearman Curnin Grunwald Owen

2015

2016

Enhancing incident management team effectiveness and organisational learning

Effective emergency management organising

Cognitive decision-support tools (heuristics)
TEAM RESEARCH METHODS

- Interviews experienced personnel (N=115)
- Observations planned (n=18) and unplanned incidents (n=6)
  - 25.4 hours of sampled video data
  - 10,449 video-coded clips
  - 19 hours audio transcriptions
  - 265 teamwork effectiveness surveys
- National Survey AIIMS/CIMS (n=870) responses) 25 agencies

Planned incidents
  - Training simulations Tas, Vic, NSW, ACT, Qld

Unplanned incidents
  - Fires in Victoria and Tasmanian
RESEARCH – OBSERVATIONAL METHODS
CONFIGURING INCIDENT CONTROL CENTRES

ICC Venue 1

ICC Venue 2

ICC Venue 3
USE OF WORK SPACE AND TECHNOLOGIES
INTRODUCING NEW TECHNOLOGIES – IMPLICATIONS FOR WORK PRACTICE
RESEARCH – OBSERVATIONAL METHODS
Good understanding of responsibilities
Spent time identifying strategies
Openly discussed mistakes
Adapted to changes in tasks/goals

Mean Rank
Pre training Post training

Team building

18 Team simulations, 240 participants, 5 states
PERCEPTIONS OF TEAM LEADERS BY THEIR PEERS

Confidence in IC

Mean Rank

Pre training
Post training

The IC made good decisions
The IC invited input from other IMT members
The IC assigned clear tasks/roles

Confidence in IC

0
10
20
30
40
50

The IC invited input from other IMT members
The IC assigned clear tasks/roles

Pre training
Post training

bnhcrc.com.au
Incident Controller x location
Effective teams

– more explicit confirming statements;

– checking out assumptions

Detecting gaps and inconsistencies: Team members actively look for and fill gaps in the team’s information base to identify and manage inconsistencies or contradictions
LOW PERFORMING TEAMS “IT’S ALL GOOD TO GO”

“Great”

HIGH PERFORMING TEAMS “IT’S ALL GOOD TO GO”

“So you’re fully loaded and you’ll be there by ...”
HIGHER PERFORMING TEAMS “I SEE YOU”

- Shared observations
- Active noticing
- Climate
  - Seeking assistance
  - Accepting assistance
  - Offering assistance
- Brokering assistance

“They’ll do that but you need to spell out xxx”
HIGHER PERFORMING TEAMS “I GET YOU”

Low performing

“Are you ready for the teleconference?”

“Yeah”

High performing

“this [teleconference] is going to be intense – you need to be ready for that”
WHAT WERE EFFECTIVE TEAM LEADERS DOING?

- Incidents Controller x location

- Graph showing the mean of leadership factor scale over different incidents and locations.
EFFECTIVE LEADERS – TEAM FEEDBACK

Teamwork practices of Incident Controllers

<table>
<thead>
<tr>
<th>Mean Rank</th>
<th>Offering assistance</th>
<th>Monitoring assistance</th>
<th>Negotiation</th>
<th>Team Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below IC’s</td>
<td>10</td>
<td>30</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Above IC’s</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

Below IC’s  Above IC’s

- Offering assistance
- Monitoring assistance
- Negotiation
- Team Feedback
EFFECTIVE LEADERS – TEAM FEEDBACK

Boundary Riding

Boundary Spanning
- Internal Coordination

Boundary Crossing
- External Coordination
EFFECTIVE LEADERSHIP: BOUNDARY RIDING

Dynamic focussing

Past  Present  Future

Task/role demands

Strategies for managing event
EFFECTIVE LEADERSHIP - BOUNDARY SPANNING
EFFECTIVE LEADERSHIP – CROSSING BOUNDARIES BETWEEN AGENCIES
BUT WHAT OF THE POORER PERFORMING TEAM LEADERS?

Implications for fire and emergency services culture.... Some cultural archetypes
CULTURAL ARCHETYPE – THE BULLDOG: AN AUTOCRATIC LEADERSHIP STYLE
Inhibition: may feel inhibited in contributing information but instead only offer *information that is already shared*.

Decision-making climate (hostility): There may be lack of cooperation; trust; *withholding of information*.

Power-distance: less likely to speak up.
CULTURAL ARCHETYPE: THE STRONG AND SILENT TYPE
CULTURAL ARCHETYPE: THE STRONG AND SILENT TYPE

Self-reflections:
Incident Controller Simulation

(Phase 3 observations)
CULTURAL ARCHETYPE: THE STRONG AND SILENT TYPE

“It is important that a leader has credibility with those he/she seeks to lead and that they have confidence and trust in the leader’s capacity to do what is needed to be done.”

“One way that such confidence could be facilitated is by the use of body language.”
CULTURAL ARCHETYPE: THE STRONG AND SILENT TYPE

“When I have been in command at an incident

I would adopt a pose which was designed and intended to convey my capacity as a confident and capable leader ....
CULTURAL ARCHETYPE: THE STRONG AND SILENT TYPE

“When I have been in command at an incident I place one hand across my chest while I use the other to stroke my chin. And I stand very still.”
“I place one hand across my chest while I use the other to stroke my chin. And I stand very still.”
PAUL REVERE; "THE BRITISH ARE COMING"
ABRAHAM LINCOLN
MAGGIE THATCHER- THE IRON LADY
IMPLICATIONS – THE STRONG AND SILENT TYPE

Team Members:

• **Failure to challenge/test assumptions:** *assume* they share similar goals, leading to false consensus and collective ignorance.

• **Poor communication/shared experiences:** may be thinking along similar lines but still be incorrect. Assumptions made about *sharing meaning* (e.g. Risk, threat, likelihood).

• **Power-distance:** remote or withdrawn leader.
SCENARIOS: WHEN THINGS GO BAD
“FIGURED WORLDS” = “WHAT YOU WANT”

Visionary leadership combination:

Red Adair meets Luke Skywalker
“REALITY BITES” WHAT YOU GET

The bulldog

The strong and silent type

Bulldogs barking or aura of calm impression management
Implications from other industries – graded warnings

Lowering the authority gradient
### Graded Warnings in Health Care

<table>
<thead>
<tr>
<th>Levels</th>
<th>Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Probe/ Non-verbal behaviour</td>
<td>“I messages” I notice that ... Are you sure ...?</td>
</tr>
<tr>
<td>2 Alert /offer alternatives</td>
<td>Would you like me to help with ... Shall we check ...?</td>
</tr>
<tr>
<td>3 Challenge/ask for clarification</td>
<td>Is there a reason you’re going to ... I think actually.... I’m concerned about...</td>
</tr>
<tr>
<td>4 Emergency Action</td>
<td>You must listen! We need to .... I’m not going to because ...</td>
</tr>
</tbody>
</table>
“AN AWKWARD MOMENT”

The ICC is in the path of the fire, we are going to die!

As a result of fire behaviour analysis and weather predictions, what are your thoughts on moving the ICC?

We’ll have the fire under control by then, and it’s too much of a hassle to shift now!

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<tr>
<th>Levels</th>
<th>Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probe/ Non-verbal behaviour</td>
<td>Shows IC Ops Predictive map Open window</td>
</tr>
<tr>
<td>Alert /offer alternatives</td>
<td>What are our contingencies boss?</td>
</tr>
<tr>
<td>Challenge/ask for clarification</td>
<td>What do you mean it’s too hard?</td>
</tr>
<tr>
<td>Emergency Action/Intervention</td>
<td>We need to move the ICC now!</td>
</tr>
</tbody>
</table>
ANALYSIS OF GRADED WARNINGS

18 human factors workshops (fire and non-fire)

- Small group exercises; 25 “awkward moments
ANALYSIS OF COMMUNICATIONS EXERCISE

18 human factors workshops (fire and non-fire)
- Small group exercises; 25 “awkward moments

Leaders to followers

ATTEMPTING TO GET FOLLOWERS TO ACT
ANALYSIS OF COMMUNICATIONS EXERCISE

18 human factors workshops (fire and non-fire)
- Small group exercises; 25 “awkward moments

Followers to leaders

>> Mostly trying to get the leader to STOP and take notice

- In half the cases challenge still not explicitly raising concern
ZONE OF ‘COPING UGLY’

Ben Brooks, Bushfire CRC
IMPLICATIONS FOR COMMUNICATION BETWEEN LAYERS?

1. Problem detection (situation assessment) assessment; risk

2. Task execution - mobilising resources

3. Anticipation planning prediction

4. Interpretation; consequence management

5. Evaluation/risk /assurance
Capturing fire-ground lessons that can be learned
2ND FIELD RIDE: 9TH-10TH JULY 2013
LEARNING FROM ADVERSITY … IT HAPPENS, JUST GET OVER IT?

We talk about field rides, staff rides, and lessons learnt, but how do we achieve real and lasting change in our organisations, and how do we learn from adversity in a manner which builds people up, rather than tear them down? While the fires were still burning in January 2013, senior staff within the Tasmania Fire Service recognised the significance of the out-of-scale event, and wanted to both learn from adversity and ensure those involved were cared for appropriately.

HOW DID WE DO IT?
1. Conducted a Field Ride with key crew leaders and decision makers who were directly involved on the Dunalley fire-ground during January 2013, in order to reflect and draw out lessons from that experience, and to identify potential learning opportunities for others.
2. The first step was critical to help those on the ground make sense of their experience and unpack what they had been through.
3. Those involved in the first step were asked if they were willing to share their stories with others.

WHAT IS A FIELD RIDE?
1. The design of The Ride drew from the processes and format of the “Staff Ride”. A highly regarded program used by the Wildfire Lessons Learnt organization in the USA (Sutton & Cook, 2003) and recently trialed in Australia by the Parks and Wildlife Service, Tasmania (PWS) at Narawntapu and the Department of Sustainability and Environment, Victoria (DSE) at Cobaw.
2. It is a highly experiential and immersive learning program which revisits the ground of an incident and enables a walk through of what happened.
3. We called it a Field Ride because we wanted to include career staff and volunteer members.

Table 1—Priorities

<table>
<thead>
<tr>
<th>Setting The Scene</th>
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</thead>
<tbody>
<tr>
<td>The Inala Rd Fire was a catastrophic fire that &quot;did not act like a normal fire&quot;. It commenced on Thursday 3 January 2013, burning in the inaccessible Redhills area off Arthur Highway. With a weather change around 3pm on Friday the fire took off quickly, reaching and devastating the town of Dunalley and other coastal townships before moving through the Tasman Peninsula. It was declared contained on January 27, and handed back to local control with the incident confirmed complete on March 20.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHEN BUSHFIRES ARE BURNING OUT OF CONTROL — REMEMBER OUR PRIORITIES!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Issue warnings</td>
</tr>
<tr>
<td>2. Protect vulnerable people</td>
</tr>
<tr>
<td>3. Protect valuable community assets</td>
</tr>
<tr>
<td>4. Stop building to building ignitions</td>
</tr>
<tr>
<td>5. Protect other community assets</td>
</tr>
<tr>
<td>6. Focus on firefighting once conditions moderate</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety comes first!</th>
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</thead>
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<table>
<thead>
<tr>
<th>Table 2—Managing Cognitive Challenges &amp; Mental Shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>House affected</strong></td>
</tr>
<tr>
<td>- - 193 dwellings</td>
</tr>
<tr>
<td>- - 116 buildings</td>
</tr>
<tr>
<td>- - 70 vehicles</td>
</tr>
<tr>
<td>- - 22 caravans</td>
</tr>
<tr>
<td>- - 18 boats</td>
</tr>
<tr>
<td><strong>Houses affected</strong></td>
</tr>
<tr>
<td>- - - 1,000 structures</td>
</tr>
<tr>
<td>- - - 100 public buildings</td>
</tr>
<tr>
<td>- - - 500 private homes</td>
</tr>
<tr>
<td><strong>People affected</strong></td>
</tr>
<tr>
<td>- - - 100 people</td>
</tr>
<tr>
<td>- - - 500 people</td>
</tr>
<tr>
<td>- - - 1,000 people</td>
</tr>
<tr>
<td><strong>Progress affected</strong></td>
</tr>
<tr>
<td>- - - 100 people</td>
</tr>
<tr>
<td>- - - 500 people</td>
</tr>
<tr>
<td>- - - 1,000 people</td>
</tr>
<tr>
<td><strong>Access affected</strong></td>
</tr>
<tr>
<td>- - - 100 people</td>
</tr>
<tr>
<td>- - - 500 people</td>
</tr>
<tr>
<td>- - - 1,000 people</td>
</tr>
<tr>
<td><strong>Likelihood affected</strong></td>
</tr>
<tr>
<td>- - - 100 people</td>
</tr>
<tr>
<td>- - - 500 people</td>
</tr>
<tr>
<td>- - - 1,000 people</td>
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</table>

<table>
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<tr>
<th><strong>Culture change</strong></th>
</tr>
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<tbody>
<tr>
<td>Five years ago we would never have had the courage to do this</td>
</tr>
</tbody>
</table>

A Leadership Culture that is willing to listen to other people’s stories so individuals and the organisation can learn and adopt.

A need to shift from sweeping vulnerabilities under the carpet to being open and receptive. This resourcing and support encourages people to share their stories.

Considerable investment has been made in tailored programs.

Story telling from adverse events must occur in the context of a “just culture” so personnel do not fear blame and judgement.

A number of learning tools were used (e.g. Professional Development, Table 1 and 2) and others developed to help inform decision makers.

STORY TELLING MATTERS
The ride aims to foster reflection in a non-blame environment, by encouraging participants to understand the reasons behind their decision-making. By hearing the narrative of a complex and dynamic event as revealed in detailed stories of the personnel directly involved, it is possible to see things that might not normally be visible to participants, thus providing alternative ways of examining and reflecting on an event.