

Understanding work-as-done: Lessons learned in a case study on fatigue risk management

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SUMMARY

This paper presents a case study of a workshop to understand rail track workers' experiences of organisational fatigue risk controls. The design and facilitation of the workshop drew on key skills, attitudes and practices for learning about work-as-done. This paper describes the successes, challenges and lessons learned associated with practically embedding these into the workshop.

KEYWORDS

Fatigue, safety culture, rail

Background and aim

A comprehensive fatigue risk management system involves a partnership between management and the workforce, to continuously monitor and manage fatigue risk (Gander, Hartley, Powell, Cabon, Hitchcock, Mills et al., 2011). Rail infrastructure companies employ fatigue risk controls, such as the provision of hotel accommodation, to mitigate the risks associated with night working and travelling long distances between site and home. However, companies face challenges in understanding front line workers' knowledge, take-up and experience of using such controls.

Understanding whether and why workers do or do not use available fatigue controls involves learning about 'work-as-done'. Shorrock (2020) set out essential skills and attitudes for learning from everyday work. The three skills are: 'ask good questions'; 'listen well', and 'take multiple perspectives'. The three attitudes are: willingness; curiosity, and humility.

Recent RSSB research also identified ways of engaging with the workforce that are perceived to be particularly effective for learning about work-as-done (Taylor, McCulloch, & Lonergan, 2024):

- Put people at ease and be relatable,
- Treat people as experts in work-as-done and avoid sounding like you are testing them,
- Allow discussions to deviate from pre-determined lines of enquiry.

RSSB Human Factors Specialists facilitated two, simultaneous small-scale workshops with 16 rail track workers, who worked directly or indirectly for one infrastructure company. This was to help understand the 'work-as-done' aspect of the company's fatigue risk management practices. The facilitators sought to incorporate the practices, skills and attributes identified by Shorrock and Taylor et al into the design and facilitation of the workshop. This paper presents successes, challenges and lessons learned in putting these approaches into practice.

Applying the skills, attitudes and practices: Successes and challenges

Facilitators created a briefing note for the company to send to prospective participants, rather than relying on managers to relay this information on their behalf. This allowed them to explain the purpose and format of the workshop and reassure participants in their own words. A semi-structured

question guide was developed. It started with open questions that aimed to empathise with participants (e.g. what impact does night shift work have on you personally?), before later focusing in on company fatigue controls. The questions about fatigue controls started broadly (e.g. how does the company help you manage fatigue?) to allow lines of enquiry to evolve and to avoid suggesting that the facilitators were seeking a 'right answer'. At the end, participants were asked what they thought would help with managing fatigue.

On the day, participants were welcomed to the workshop in a relaxed and friendly tone as they entered. The facilitators purposely wore casual clothes (such as jeans) rather than usual office wear to help put participants at ease. In the opening brief, facilitators acknowledged that they were novices in front line track work and that the participants were the experts. To focus on the discussion, technology was not used during the workshop. Note-taking was via flipcharts and pens and paper. This allowed facilitators to be transparent about what was being written. Active listening techniques were used, such as reflecting and summarising what participants said. Facilitators were careful to avoid correcting participants, for example if an individual said something contrary to scientific evidence about fatigue, or incorrectly described an operational procedure. Discussions about adjacent but not directly relevant topics, such as operational processes, were allowed to continue for some time before moving on. This was to avoid stifling discussions. Facilitators asked clarifying questions when necessary. This involved being comfortable with drawing attention to gaps in their operational knowledge.

The workshop took place in the company's head office between 21:00 and 23:00, before a night shift. Ideally, facilitators would have engaged with participants in their normal working environment, to meet them 'in their territory'. However, there are limited welfare facilities for track workers, so it was deemed neither safe nor practical to do this. An online workshop had been considered but it was concluded that this would compromise the facilitators' ability to build rapport with a hard-to-reach group. During the workshop, facilitators learned that the timing and location of the workshop had inadvertently interfered with participants' usual preparation for a night shift. Participants had had to make an extra car journey from home to the office, before travelling to their work sites. For most participants, the work sites were not located close to the office or home. Participants had therefore had to eat their evening meal and leave home earlier than usual. An additional challenge was that focusing on listening rather than taking high-fidelity notes presented some challenges when writing up the findings, as this placed greater reliance on facilitators' memory.

Discussion

Despite the challenges discussed, participants were open, and the workshop provided novel insights and feasible suggestions to the company. Ideas for improvement included adjustments to shift patterns and better methods of communicating fatigue-related material. In future, we would consider a different compromise: carrying out an online workshop to prioritise participants' schedules, accepting a potential reduction in rapport and group dynamics.

The skills, attributes and practices identified in the work by Shorrock and Tailor et al may seem like 'common sense' to the Human Factors community, where a natural curiosity about others' work and experiences may have led individuals to this profession. Nevertheless, this work draws attention to the constraints and trade-offs faced by Human Factors professionals – our own 'work-as-done' reality. It also highlights the need to carefully weigh up the impact of decisions on participants, and to continually reflect on attitudes and hone facilitation skills. These are essential to Human Factors professionals, present and future.

References

- Gander, P., Hartley, L., Powell, D., Cabon, P., Hitchcock, E., Mills, A., & Popkin, S. (2011). Fatigue risk management: Organizational factors at the regulatory and industry/company level. *Accident Analysis & Prevention*, 43(2), 573-590.
- Shorrock, S. (2020). Why learn from everyday work? *Hindsight Magazine*, 31, 8-9. Brussels, Belgium: Eurocontrol.
- Taylor, A., McCulloch, O., & Lonergan, J. (2024). Enhancing organisational learning about how track worker safety is managed. Rail Safety and Standards Board.