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Introduction

The aim of this paper is to outline the use of a qualitative research method called the Scenario Invention Task Technique (SITT) in the context of a reef tourism study. The study was undertaken to gain a better understanding of the relationship between working time arrangements, sleep and the capacity to perform emotional labour in the reef tourism workforce of Far North Queensland (FNQ). To achieve this, focus groups were conducted with reef tourism workers during which the SITT was applied. This involved asking reef employees to create a challenging/negative customer service scenario to help stimulate insights. Employing a task that required participants to create a challenging customer service situation was considered to promote the acquisition of rich insights in a way that promoted applicability and trustworthiness of findings. The paper starts by describing the SITT and then outlines the research context of the study, followed by a section of how the SITT was applied. The paper concludes by offering reflections on the use of SITT and considers its broader application in tourism research.

SITT explained

Eliciting expertise can be complex, especially since this type of knowledge can be tacit (Garrick, 2018). Previous research shows that the SITT is a helpful means for probing such knowledge and stimulating situational insight, predominantly through the placement of participants in certain hypothetical scenarios (Naweed, 2013; 2015). The SITT has been applied in focus groups and one-to-one interviews of various workplace settings where people engage in complex and dynamic work, including rail (Naweed & Balakrishnan, 2014) and aviation (Naweed & Kingshott, 2019).

The SITT requires the research participant to create or "invent" challenging scenarios and/or stories related to their work (Naweed & Kingshott, 2019) with encouragement for them to use their own formalisms and interpretations. The SITT also makes use of illustrations and drawings to assist participants in articulating their stories and ideas. Once a participant has invented their scenario and shared it with the researcher (and the rest of the participants if in a focus group), they are asked to propose ways to modify the challenging scenario so as to change the outcomes, for example by reducing risk if it is a safety-critical situation. Through this, it is possible to simulate the scenario *in situ* and identify strategies to moderate the challenges in the scenario, prevent the scenario from ever happening (if dangerous), or develop recovery strategies to deal with it more effectively.

In previous applications of the SITT, participants have been recruited based on eligibility characteristics such as their professional experience within a particular workplace setting. Recognition of this expertise enables researchers "to more accurately capture rich descriptions of real-world scenarios" (Naweed & Kingshott, 2019, p. 5). Since the focus group method is qualitative in terms of its enquiry, the intent is not to generalize information,

but rather, elucidate the specific and provide meaning in terms of the workplace setting in which the research is carried out. Thus, participants are selected according to their potential to provide insights into the topic under investigation based on an appropriate sampling strategy, such as purposive sampling (Guest, Bunce & Johnson, 2006). The number of research participants continues until saturation is reached, when the same categories arise repeatedly within the data and no more new information is added (Bowen, 2008).

Having elicited knowledge via SITT, collected data are then analysed to address the particular aims of a study. This is where standard analytical techniques employing open, axial, and selective coding processes may be applied to transcribed data, with appropriate approaches (e.g., deductive, inductive) depending on the research question(s). Any visual material collected in addition to transcriptions, such as drawings or schematics, can be analysed using the same methods to support established themes. Consistent with most qualitative methods, the findings gained from use of the SITT are also amenable for later validation, for example with quantitative research methods. For example, SITT-based findings from Naweed's (2013) research on rail driving cognitions were later supported empirically by an experimental study by Hickey and Collins (2017).

The research context: A reef tourism study

Conducting research with tourism workers has a clear rationale. As a labour-intensive service industry, the economic success of tourism depends on its workforce. The individual tourism worker plays a vital role in the employee-customer nexus but long working hours, shift work and insufficient sleep can lead to poor service delivery. The personal costs for providing 24/7 service by tourism workers are largely underestimated (Brand et al., 2008). Working time arrangements may contribute to health and safety concerns (i.e. prolonged working hours and weekend work) and take their toll on the workforce in terms of greater risk of mental and physical health outcomes.

Much of the existing research addressing sleep and the tourism industry has focused on the hospitality sector, i.e. quality of sleep in hotel guests (Enck, Walten & Traue, 1999; Lockyer & Roberts, 2009; Pallesen, Larsen, & Bjorvatn, 2016). Investigations of sleep, work patterns and wellbeing among tourism workers are limited, which is surprising given the potential personal (health and safety) and organisational (tourist safety, economic success) benefits of promoting good sleep health.

Tourism culture dictates that frontline tourism service employees perform emotional labour to behave in certain ways. Emotional labour is showing the right emotions and expressing the willingness to be of service to customers through responsiveness and empathy (Bryman, 2004; Weaver & Lawton, 2006). For example, tour guides, travel agents, waiters and tour operators are supposed to convey they are "in 'holiday mode' in speech, aspect and product, throughout the working day all year" (Boniface, 1998, p. 749). The customer service literature has predominantly focused on the mood of customers during service encounters (Sirakaya, Petrick & Choi, 2004; Mattila, 2000). However, research on the emotional well-

being of tourism employees, for example in response to reduced sleep and the need to provide emotional labour, is underrepresented.

It is within this context that a reef tourism study used the SITT to better understand the link between emotional labour and fatigue. While not well understood, this link is a fundamental part of the work experiences of reef tourism employees. Using SITT within this research context places the research participants into their scenario whilst stimulating situational insights about the contextual factors that they have to deal with on a daily basis. As the next section shows, the SITT capitalised on rapport building and generated scenarios that tapped into the lived experiences of participants, leading to intriguing discussions.

How the SITT was used

Semi-structured focus group discussions were conducted with a purposive sample of forty-two (42) reef tourism employees to gain a better understanding of the relationship between working time arrangements, sleep and capacity to perform emotional labour in the FNQ reef tourism workforce. Research participants were recruited by contacting reef tourism operators via invitation emails including information about the study. Stakeholders interested in participating in this study contacted the lead researcher, who in turn provided them with more information about the timing and place of the focus groups. Focus groups continued until no new insights or information was gained and a similar range of responses was received, in this case, it occurred after eight sessions. The study took place from August to October 2017 with focus groups sessions lasting from 30 to 120 minutes.

Focus group discussions were led by the first author with questions designed to elicit participants' views on a variety of topics. Table 1 provides an overview of the protocol with example questions. The sessions began with a series of general questions about sleep, various fatigue management strategies and the participants' individual perspectives of emotional labour. These questions acted like an ice breaker and to generate rapport. In order to run SITT effectively, Naweed (2015) states that it requires a firm and dependable rapport-building platform before it can be applied. Hence most studies using SITT have been conducted with focus groups or one-to-one interviews with the technique being initiated partway through the session.

Table 1. Overview of focus group protocol

Question topic	Example content	Example questions
Participant's relationship with sleep	Sleeping hours, sleep quality	Do you think you get good quality sleep? What affects the quality of your sleep?
Personal approaches to fatigue management	Fatigue at work, fatigue alleviation	Do you ever feel tired at work? If yes, what does that feel like? What do you do if you are feeling tired at work?
Individual perspectives about emotional labour	Influence of fatigue on emotional labour,	Do you think that feeling tired influences your capacity to perform

	effective emotional labour techniques	emotional labour? What strategies have you developed to be more effective at providing emotional labour?
Emotional labour scenario invention task	Create scenario, probe for influencing factors contributing to emotional labour	Invent an everyday challenging scenario that may result in a negative customer service situation. What if you were fatigued? How would it change the customer service situation/your capacity to perform emotional labour?
Possible solutions	Countermeasures, broader issues, areas of improvement	What strategies have you developed to be better prepared to manage negative customer service encounters?

The SITT was initiated halfway into the focus groups when participants were asked to invent an everyday negative customer-service scenario for an employee working in reef tourism. In the first step, participants were prompted to explain any details about their scenario, highlighting any specific points or factors of interest, using their own formalisms and interpretations. In the next step, participants were asked to describe how their scenario would hypothetically change if they felt fatigued, for example by highlighting how increased levels of fatigue would change the way they interacted with customers.

The final step required participants to consider areas of improvement. Here, participants were required to approach the scenario from different perspectives, for example, how an inexperienced reef worker would approach it, or what strategies or changes would prevent such challenging/negative situations from happening, or how they could become more effective in dealing with such situations.

Analysis of audio recordings through NVivo (11) involved the identification of key themes from comments in the transcripts, grounding the findings (Krueger & Casey, 2001). The analysis followed a structured Grounded Theory approach (Glaser & Strauss, 1967) and was inductively coded, meaning that themes and categories evident in the discursive narratives of the participants were not predefined, but emerged naturally. Scenario descriptions and illustrative examples were supported through participant quotes to preserve the meaning of the data (Krueger & Casey, 2015).

Reflections on the SITT and its role in the study

This paper focuses on the novelty of using SITT itself to gain interesting findings in the reef tourism context, and while outlining the findings is beyond its current scope[1], use of the SITT went some way towards helping the researchers engender a deeper understanding of the perceptions, behaviours and locus of control of experiences associated with the emotional

[1] A paper from this study is presently being considered for publication (Pabel, Naweed, Ferguson & Reynolds, under review).

labour faced by participants, and possible measures to deal with it more effectively. The collection of data was, however, only one aspect of the process. Through application of the SITT, the researchers developed a better understanding of the importance of sleep, possible reduction in absenteeism and a means to enhance the reef tourism employees' morale and satisfaction with their job. This included identification of possible strategies to better cope with emotional labour. A further important benefit was that the participants became ostensibly more aware of their own occupation and behaviours.

As a method, the SITT was invaluable for understanding worker perceptions, and as a knowledge elicitation technique, encouraged creativity of thought. In the focus group setting, this helped stimulate discussion amongst participants. In previous studies, the SITT protocol has encouraged research participants to share their thoughts visually, in both focus groups and on a one-to-one design (see Naweed, 2013; Naweed & Balakrishnan, 2014, Naweed & Kingshott, 2019). In the current study, scenario visualisation was offered to participants (i.e. through provision of A4 sheets of paper and pens), however, research participants preferred to converse about their experiences verbally. Many knew one another from existing reef tourism networks and felt comfortable in conversing about their daily challenges in verbally animated ways rather than through visual expressions.

To explain the transferability of the SITT to other areas of tourism research, Guba and Lincoln's (1994) criteria of establishing the trustworthiness of qualitative data provide a useful structure. They advocated the use of dependability, credibility and transferability to establish the trustworthiness of qualitative data. Dependability can be enhanced by giving clear descriptions of how a study is conducted, so that another researcher can see how the conclusion was reached (De Crop, 2004). As a method, SITT was clearly explained using its specific procedures, hence can be replicated by other researchers in further areas of tourism. Credibility is achieved by verifying a researcher's analysis and interpretation (De Crop, 2004), and in this case, the research team worked together in ensuring that the research procedures were followed in an objective way and both researchers were involved in interpreting the data.

Transferability is ensured by using thick descriptions, allowing readers to understand in what ways the dataset was analysed by making extensive use of quotes to support points made and exemplify the voice of the research participants. The open-ended nature of the questions led to interesting discussions amongst the research participants. While all participants worked within reef tourism, their roles varied and included dive instructors, skippers, operations managers, reservation/check-in staff, and other crew members including cruise attendants, and food/beverage attendants. This diversity in focus groups allowed participants to discuss opinions relating to their daily duties. Interviewing reef workers on a one-to-one basis may also be effective and elicit more authentic stories from research participants who may feel uncomfortable or are reluctant to share certain information in front of other participants.

Whilst the study was localised to a sample of reef tourism employees, the SITT is likely to be transferable to other settings within tourism and hospitality, particularly in the context of employees who deal with prolonged working hours and intensive levels of emotional labour. This would stimulate further insights and broaden the focus of this technique in other areas of

tourism research and make a valuable contribution to the literature. Looking beyond the technique itself, there is great versatility in the toolkit that appears to be suited for different operational environments and to elicit expertise in different contexts.

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