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<cn>12<en><ct>Using qualitative repertory grid interviews to gather shared perspectives in a sequential mixed methods research design

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<a>INTRODUCTION

In this chapter, we consider a specific example of applying mixed methods designs combining both qualitative and quantitative data collection and analysis approaches, giving particular attention to issues including reliability and validity. Human resource management (HRM) researchers, like others setting out to examine a novel or insufficiently defined research topic, frequently favour qualitative approaches to gather data during initial stages, to facilitate an in-depth exploration of individuals' notions of a subject matter and development of theory (Symon and Cassell, 2012). A variety of qualitative data gathering and analytic methods can be used to such effect, including focus groups followed by thematic analysis of data (for example, Braun and Clarke, 2006) or diary studies (for example, Xanthopoulou et al., 2009). Having made sense of gathered qualitative data, scholars may often decide to examine their chosen topic through further quantitative study, such as a survey.

To this end, we consider a specific example of using the repertory grid technique (RGT) (Kelly, 1955, 1963) as the qualitative first stage in a mixed methods design. Whilst the RGT is a popular data gathering technique in management and organisation sciences (MOS) generally and HRM research specifically, utilising it as the first stage of mixed methods research is unusual. In particular, we discuss the application of the RGT for aggregative

analysis of data collected from interviewees. Such an approach to analysing RGT data is rare as, typically, the technique is used on its own within an interview study of one or more participants. Yet, it offers considerable utility to examine shared perceptions, as we illustrate from our personal experience of researching individual workplace performance amongst 25 professionals and managers. We begin our chapter by offering an outline of the RGT, which includes a discussion of its validity and caveats as well as its history of use. Subsequently, we provide details of our application of the RGT in the context of wider work performance research. Having further summarised potential challenges and shortcomings, we conclude by a discussion of the method and its usage to elicit shared perceptions within mixed methods research.

<a>DESCRIPTION OF THE METHOD AND HISTORY OF ITS USE

Within this section, we explain the RGT's origins and history of use from a more general point of view; details regarding its operationalisation for HRM research more specifically are provided in the subsequent section outlining an application to develop a model of individual workplace performance. The foundations of the RGT lie in Kelly's Personal Construct Theory (1955, 1963), which was initially conceived in the context of family therapy, but is today no longer confined to the clinical domain. More recently, the RGT has been used for a variety of academic and practical endeavours, such as to examine organisational culture (Dick and Jankowicz, 2001) or organisational learning (Sillince and Shipton, 2013), for career counselling and coaching purposes (Brook, 1992), for professional training (Fransella and Bannister, 1977) and its evaluation (Jankowicz, 1990) or employee selection (Brewerton and Millward, 2001), amongst others. Outside the HRM/MOS field, the technique has also been used widely, examples including in product development (Goffin and Koners, 2011), business analysis (Wright et al., 2013) and marketing (Marsden and Littler, 2000).

According to Personal Construct Theory, the world is "constructed", an individual formulating their own ways of seeing the world "through transparent patterns or templates which he [*sic*] creates and then attempts to fit over the realities of which the world is composed" (Kelly, 1955, pp. 8ff.); such patterns are known as "constructs". Since individuals' constructed worlds (or their "construction systems") are based on their own unique experiences, they differ from person to person (Brewerton and Millward, 2001) and also develop and alter over time when tested out against the reality (Kelly, 1955, 1963). Kelly suggests that an individual's construction system is made up of a finite number of dichotomous constructs, which are bipolar (for example, ugly-beautiful), that is being formed by one relationship of similarity and one relationship of difference. The manner in which individuals speak about their construction system is indicative of how they view the world – or what the two ends of a construct mean for them. Since constructs are – often non-verbalised – abstractions of the world, Kelly introduced the notion of "elements". Elements exemplify the area that is being explored, helping individuals in thinking and talking about their constructs. They can be people, objects, places, activities or other similarly tangible representations of the area being investigated (Jankowicz, 2004).

To learn about a person's constructs, Kelly developed the "Role Construct Repertory Test" (or "Rep Test"), an idiographic technique facilitating the communication of construction systems. Although procedure and technicalities have evolved over time, the basic idea of eliciting elements and constructs to learn about an individual's "implicit theories" of the world (that is, schema-like knowledge structures individuals use to process and respond to observed stimuli; Detert and Edmondson, 2011), through which they try to make sense of it (Fransella and Bannister, 1977), remains the same. As such, the RGT is typically employed within a particular form of structured interview, the so-called repertory grid interview (RGI), "extracting personal constructs in a systematic way" (Hassenzahl and Wessler, 2000, p. 444).

As part of this, an interviewer first elicits elements from the interviewee, before going on to elicit that person's constructs in relation to the area being explored. Finally, constructs are linked to elements by constructing a grid matrix. We provide further detail of the procedure of conducting a RGI in our example of using the RGT to develop a work performance model.

Questioning within RGIs focuses on individual constructs through which respondents understand the study's topic (Jankowicz, 2004), the RGT purporting to minimise researcher interference or bias in the data gathering process (Whyte and Bytheway, 1996). In practice, this means that interviewees talk about the topic in their own words, without being influenced by a researcher's predetermined questions or probes (for example, Slater, 1977). The RGT is also considered a reliable method, both regarding internal consistency as well as stability, test-retest reliabilities (over a period ranging from one week to several months) across studies having been found to be adequate to high (r_{tt} = 0.41 – 0.95), for instance (Hardison and Neimeyer, 2012; cf. Adams-Webber, 1989). Finally, it has been suggested that the technique offers adequate validity (for a full discussion refer to Hardison and Neimeyer, 2012). Indeed, with regard to face validity, RGIs do well, given the process of eliciting elements and constructs is very transparent as further detailed below.

Notwithstanding the assumption that implicit theories are unique to the individual as aforementioned, the constructs, of which these theories are composed, may be shared by individuals (Arnold et al., 2010; Kelly, 1955, 1963). Consequently, the RGT can also be used to elicit shared patterns across individuals. Having gathered data from multiple respondents via individual interviews, there are a variety of approaches that HRM researchers can choose to analyse data at the group level. These include principal components analysis (for example, Senior and Swailes, 2007), generic content analysis (for example, Purvis and Cropley, 2003) or similarity matching (Borman, 1987). Yet, an alternative analytical approach was developed some 35 years ago by Honey (1979a, 1979b). In contrast to other group analytical methods,

which may neglect the complexity of elicited data in the aggregation process, Honey's approach allows aggregation of interview data in a way similar to larger-scale questionnaire analysis, whilst maximising retention of individual meaning contained in the (qualitative) grid information. His procedure entails content analysis across all respondents, this being "concerned with the accurate expression of common or shared context related constructs among collectives of people" (Hill, 1995, p. 107).

<a>USING THE RGT TO DEVELOP A MODEL OF WORK PERFORMANCE

We used the RGT here as part of wider research on individual workplace performance. Our aim was to advance understanding of individual workplace performance in terms of how the construct can be defined, conceptualised and operationalised. Three specific objectives were addressed within a sequential mixed methods design (Tashakkori and Teddlie, 2010) consisting of three interlinked studies building on each other (Figure 12.1).

Our first study was a systematic review and psychometric meta-analysis (Hunter and Schmidt, 2004), which focused on providing an enhanced understanding of how to define, conceptualise and measure individual workplace performance. Systematic review methodology was used to review the literature, because its rigour and standardisation enable greater transparency, replicability and clarity of review findings (Briner et al., 2009; Rojon et al., 2011) in comparison to other possible literature review strategies. The second study explored working individuals' notions of performance, employing the RGT (Kelly, 1955, 1963) to inform personal interviews with a varied sample. This study focused on gathering individuals' notions of performance to provide the basis for the development of a new model of performance. Since the purpose of this study was to explore in detail individuals' thoughts and ideas pertaining to performance, a qualitative approach was more suited than a quantitative one (Saunders et al., 2016). The RGT in particular was thought to be a useful way of gaining a real-life insight into individuals' understanding of performance, because it allows

interviewees to contextualise their thoughts more easily compared to other qualitative approaches (Kelly, 1955, 1963). In the final study, our objective was to test the model developed based on findings from the second study 2 in two consecutive phases, using a newly designed multi-rater performance measure to examine the model's applicability in a wider context. Given the main focus of both study phases was to statistically evaluate the new performance model as well as its associated performance measure, a quantitative research approach was considered more appropriate, because it facilitates data collection from larger samples, which are required to perform statistical analyses (Saunders et al., 2016).

<INSERT FIGURE 12.1 ABOUT HERE>

Since our chapter is concerned with using the RGT as part of a mixed methods design, we now explain in detail how we applied the technique within our research, following a systematic review and meta-analysis. We chose the RGT to help us gain a real-life insight into what working individuals who perform in organisations think about performance. Despite having gained a thorough understanding of individual workplace performance through our systematic review and meta-analysis, we were aware that this understanding was of a theoretical nature. It was therefore equally important to collect data regarding individuals' beliefs and ideas, formed through their day-to-day experience with performance-related behaviours in the workplace. The RGT offers a powerful means of learning about individuals' notions of work performance, mainly because it allows participants to contextualise their thoughts by drawing directly on experience with the people they work with. Three prior studies that had drawn on Personal Construct Theory to arrive at performance categories for specific jobs (Borman, 1987; Davis, 2005; Hedge et al., 2004) were identified through the systematic review, leading us to conclude that the RGT could also be a useful method for our

own study. However, rather than looking at specific occupations, as was done by these three studies, the scope of our study was broader. As such, it aimed at developing a generic model of individual workplace performance by eliciting performance constructs from participants from a wide variety of cultural and occupational backgrounds; in other words, individuals with different jobs and varying levels of work experience and management responsibilities, from diverse industries.

<b>Data Collection Using the RGT

Our overall approach to data collection can be summarised as shown in Figure 12.2. Having concluded that the RGT should be utilised in the initial stage of developing a new performance model, we conducted personal, face-to-face RGIs to "uncover" interviewees' performance constructs. Participants were working adults with at least three years of prior work experience to ensure they could contextualise the interviews. They were purposefully selected to represent a wide range of industries and sectors, as well as national cultures, to enable gathering a comprehensive picture of diverse individual experiences of work performance. Following expert recommendations regarding sample size and data saturation within heterogeneous populations such as ours (Brinkmann and Kvale, 2015; Creswell, 2007), we interviewed 25 individuals: participants were mostly male (72 per cent), their age ranging between 25 and 54 years (M = 38.60; SD = 9.81); 48 per cent of participants were British, the remaining individuals originating from a variety of countries (India, France, Germany, Russia, USA, China, Jordan, Switzerland); the majority of participants were highly qualified (68 per cent postgraduate degree, 28 per cent undergraduate degree) and worked in top or middle management positions (56 per cent); 24 per cent of individuals describing themselves as professionals/specialists; 36 per cent of participants had more than 20 years of work experience, 32 per cent had 10–20 years, 24 per cent had 6–9 years, with the remaining 8 per cent having had 3–5 years of work experience. They were employed both in the public and

private industry, with industry sectors being diverse, for example, automobile, education, finance, hospitality, local government and retail.

<INSERT FIGURE 12.2 ABOUT HERE>

At the outset of each interview, we asked participants to think of nine individuals they currently (or have previously) interact(ed) with at the workplace, namely, three persons that they consider high, medium and low performers respectively. These nine individuals were the elements. The elements' names were written on one file card for each and were also entered in the nine columns at the top of a grid that was used to supplement the interview, as is customary for RGIs (see Figure 12.3 for an example of a completed grid). Each interviewee then assigned performance ratings to their nine individuals ranging from 1 (very low workplace performance) to 5 (very high workplace performance), writing these underneath the individuals' names, in the first line of the grid (the "top view") (Figure 12.3). Next, we elicited each interviewee's bipolar performance constructs. Presenting a "triad" of three individuals' name cards (that is, three elements) at a time, each interviewee was requested to pair up two individuals. These two individuals (the "pair") were required to have something in common in terms of their performance-related behaviour that differentiates them from the third individual (the "single"). Each interviewee was then asked to elaborate on the behaviours that make the individuals forming the pair similar, distinguishing them from the single, and to write these behaviours (the constructs) in the grid (the pair description on the left-hand side, the single description on the right-hand side). This process of presenting triads was continued for each interviewee until constructs pertinent to individual workplace performance had been exhausted. The final step of the RGI, a rating procedure, involved treating the two construct poles as extremes on a continuum: On a scale from 1 to 5, each

interviewee had to decide for each of their elements whether it was rather like the description of the pair or rather like the single description (5 = very much like the pair, 1 = very much like the single).

<INSERT FIGURE 12.3 ABOUT HERE>

<b>Data Analysis: Individual Level

Interviewees generated a total of 317 performance constructs (for example, “ask for permission/never asks for permission”; “makes friends and works along with others/makes enemies at work”; “take initiative where needed/will not take initiative”). On average, 13 constructs were elicited per interviewee, with a minimum of 6 and a maximum of 18 (*SD* = 3.06).

These data were initially analysed individually and manually to determine the importance of each elicited performance construct/behaviour for the respective interviewee by deriving an importance score for each construct. This enabled insights into how each interviewee understands individual workplace performance (Brewerton and Millward, 2001). First, we compared the top view overall performance ratings for each interviewee against each set of construct ratings, noting down and summing the differences. For example, where a top view overall performance rating was “2” and a construct rating was “3”, the difference was “1”. Second, the top view overall performance scores were reversed and the same process was applied again, difference scores being taken down. For example, a top view overall performance rating of “2” was reversed to “4”. Differences between these two sets of sums were then calculated to create an importance score for each construct. For our research, importance scores ranged from 0 to 24, the mean being 9.96 (*SD* = 5.33). Based on these scores, the constructs were ranked into descending order of importance, the higher scores

being the most important constructs for an interviewee concerning their notion of individual workplace performance, the lower ones being less important, but still dominant constructs.

<b>Data Analysis: Group Level

Honey's approach of aggregating data to the group level was then applied. First, we determined for each interviewee which of their constructs range in the highest third (the "top data"), the middle third (the "medium data") and the lowest third (the "tail data") amongst all their importance scores. The top data are those constructs that are linked most closely with high individual workplace performance; conversely, the tail data constructs are associated least with high individual workplace performance. Second, the performance constructs were sorted into categories (and subcategories where applicable) of two or more constructs, separately for each level of importance (top/medium/tail). Next, categories across the three levels of importance were compared. Categories that resembled each other within the three levels were grouped together (for example, categories pertaining to communicating effectively were identified in all three levels). Subsequently, the constructs comprising each of the categories and the ratio of top to medium to tail data were examined closely. Where a category consisted mostly of top-level and medium-level constructs, it was retained to form part of an initial model of individual workplace performance, this being a category interviewees believed to be an important performance indicator. Categories in which more tail constructs than top constructs were represented were discarded, because the interviewees agreed such categories are not strongly associated with performance and thus not important enough to be kept further.

The aforementioned process of sorting constructs into categories and developing a model was undertaken twice, independently by two researchers, as recommended (Honey, 1979a). As such, two independent, initial models of individual workplace performance emerged. Model A had nine categories and ten subcategories, whilst model B featured twelve

categories and three subcategories. A comparison of the two models indicated that the majority of behaviours (55 per cent) had been sorted into nine conceptually identical or very similar categories. Since there was not complete overlap between the two models, we undertook an expert panel discussion consisting of five HRM scholars by way of categorising the remaining 45 per cent of behaviours. Panel members were split into two groups of two and three individuals, respectively. Each group was asked to sort half of the uncategorised behaviours ($N = 42$) into the nine categories, which, as suggested by Honey (1979a), were presented to the experts alongside three to four exemplar behaviours. This was followed by a discussion amongst all participants in which the two groups justified their sorting decisions. Any disagreements of how and why behaviours had been sorted into categories were resolved within this final panel discussion.

<b>Findings: A New Model of Individual Workplace Performance

Discussions within the expert panel confirmed the nine performance categories that had emerged from models A and B. Moreover, a tenth category pertaining to work–life balance was added to the model, a number of previously uncategorised behaviours relating to this concept. In addition to this, we chose to include a separate eleventh category to reflect the notion of counterproductive performance (Viswesvaran and Ones, 2000), which was found to be inherent in a number of constructs elicited from interviewees (for example, "lazy/conscientious, works hard", "motivates others/destructive") and which researchers understand as "voluntary behaviour that harms the well-being of the organization", detracting from organisational goals (Rotundo and Sackett, 2002, p. 69).

The resultant performance model has eleven categories, as described through 57 subcategories (Table 12.1). Behaviours for each of the eleven categories were elicited from, on average, 15 of the 25 study participants (60 per cent). Each individual mentioned behaviours that fell into seven of the eleven performance categories on average, the minimum

being four, the maximum ten. Our new model formed the basis for a larger, survey-based study, aimed at testing and refining it. We shall reflect on this further in the discussion section.

<INSERT TABLE 12.1 ABOUT HERE>

<a>CHALLENGES AND SHORTCOMINGS

Invariably, the most pertinent challenge of using the RGT in conjunction with Honey's (1979a, 1979b) group analysis technique will arise if there are no common conceptions in the data elicited from individual RGIs, that is, if interviewees are not in agreement when it comes to the topic being researched. Whilst such an outcome could be interpreted as an inherent danger – or disadvantage – of using Honey's (or indeed any group analysis) approach to analyse RGI data, it represents an interesting finding in itself, namely, that it may not be possible to elicit a shared understanding of the topic. Rather, it may be the case that it is highly idiographic in nature, rendering the idea of developing a framework based on common notions nonsensical.

Aside from lack of consensus, a further possible disadvantage is the relatively large amount of time required for manual analysis of RGI data (Honey, 1979a; Thota, 2011). Nevertheless, analysing data manually, whilst likely being labour-intensive, enables the researcher(s) to remain close to the data collected, supporting the gaining of deeper insights compared to that gained by a software-driven analysis procedure or statistical analysis.

Concerns can also be raised regarding the feasibility of categorising data elicited from RGIs without any preconceived ideas or imposing one's own insights. Thota (2011) has given this issue some thought, concluding that even though a data-driven and researcher-led content analysis approach is advantageous in terms of any categories developed being close to the raw

data, the danger of replicability of such a category system is low given the potentially idiosyncratic interpretation. Even Honey (1979a) acknowledges that there is a risk of distorting individuals' data by forcing constructs into categories. Still, according to both Honey (1979a) and Thota (2011), these issues can be remedied by asking at least two independent scholars to carry out the data analysis, by way of checking the coding scheme's consistency. In our study, we involved two researchers in the process, who independently sorted the constructs into categories; second, the category systems developed by both researchers were discussed as part of a panel meeting of further, independent scholars. Consequently, even though Honey's (1979a, 1979b) aggregative approach may not be faultless, the above highlighted actions can be taken to address the perceived issues.

<a>DISCUSSION

In this chapter, drawing on a project examining individual workplace performance, we have outlined how the RGT can be used as the first data collection stage within a sequential mixed methods design. Following an explanation of the method, its usage in HRM and related fields, as well as its philosophical underpinnings, we noted that the RGT has been found to be reliable, valid and relatively free from bias compared to other qualitative approaches.

Although the RGT is used frequently at the individual level, we have highlighted that analysing constructs across multiple interviewees is also possible using a variety of analytical approaches. In our example study, we chose Honey's (1979a, 1979b) aggregative analysis method, allowing the granularity of individuals' data to be retained even when analysed at the group level. This enabled us to elicit shared understandings of work performance. Considering the RGT study in the context of our research project as a whole, gathering data through RGIs and analysing them using Honey's (1979a, 1979b) approach was instrumental to gaining an in-depth insight into the performance construct per se. In comparison with other qualitative data gathering strategies, the sample size required to achieve data saturation (in our

case 25 interviews) is in our experience very similar. In contrast, the data collection is perhaps slightly less onerous, given that participants write down their bipolar constructs themselves, making the recording and transcribing of data unnecessary. Analysis of data is undertaken initially for each interview individually – which takes approximately the same amount of time compared to other qualitative approaches – and then at the level of the group. In our case, this latter stage worked particularly well, the manual aggregation of interviewees' constructs enabling us to stay close to the data. Whilst such an approach may be more labour-intensive compared to other ways of aggregating RGI data – or even compared to other qualitative methods – involving a number of different scholars (with and without knowledge of the research project) in the group analysis process as recommended is likely to improve validity.

Overall, employing the RGT enabled us to address our research objective of developing a new performance model based on individuals' (common) understanding of the topic. This model formed the basis for further quantitative research. However, as highlighted in our section on challenges and shortcomings, it may not always be possible to elicit common notions from interviewees, in which case alternative explanations about the topic being investigated need to be considered. To conclude, our experience shows that the RGT can be very usefully applied in the early stages of a mixed methods research project – and we hope fellow HRM scholars will also consider using it.

<a>ANNOTATED FURTHER READING

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Table 12.1Performance framework resulting from RGIs

11 categories	Examples of 57 subcategories
Demonstrating Knowledge and Skills	• Having and Applying Technical Knowledge • Thinking Analytically
Communicating Effectively	• Being Comfortable at Giving Presentations/Speaking Publicly • Showing Active Listening Skills
Demonstrating Effort and Drive	• Taking Initiative • Thinking Long Term
Leading/Managing Others	• Delegating • Assuming Responsibility
Engaging with Others	• Supporting Others • Showing Respect for Others
Showing Creativity/Openness for Change	• Generating Ideas and Strategies • Adapting to Changes
Planning and Organising	• Demonstrating Organised Working Approach • Demonstrating Thoroughness
Behaving Professionally	• Demonstrating Credibility • Acting Honestly
Displaying Self-confidence	• Coping with Criticism • Being Assertive
Balancing Work and Life	• Balancing Work and Life
Showing Counterproductive Conduct	• Being Dishonest • Displaying Rigid Attitude to Change

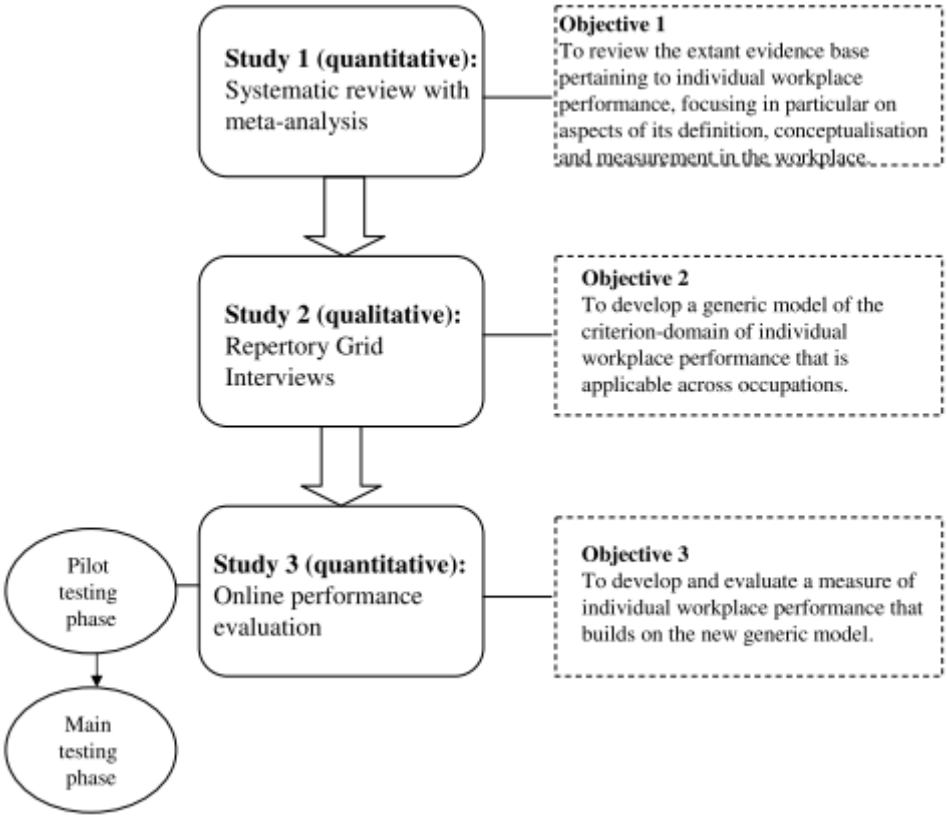

Figure 1 Overview of the research process

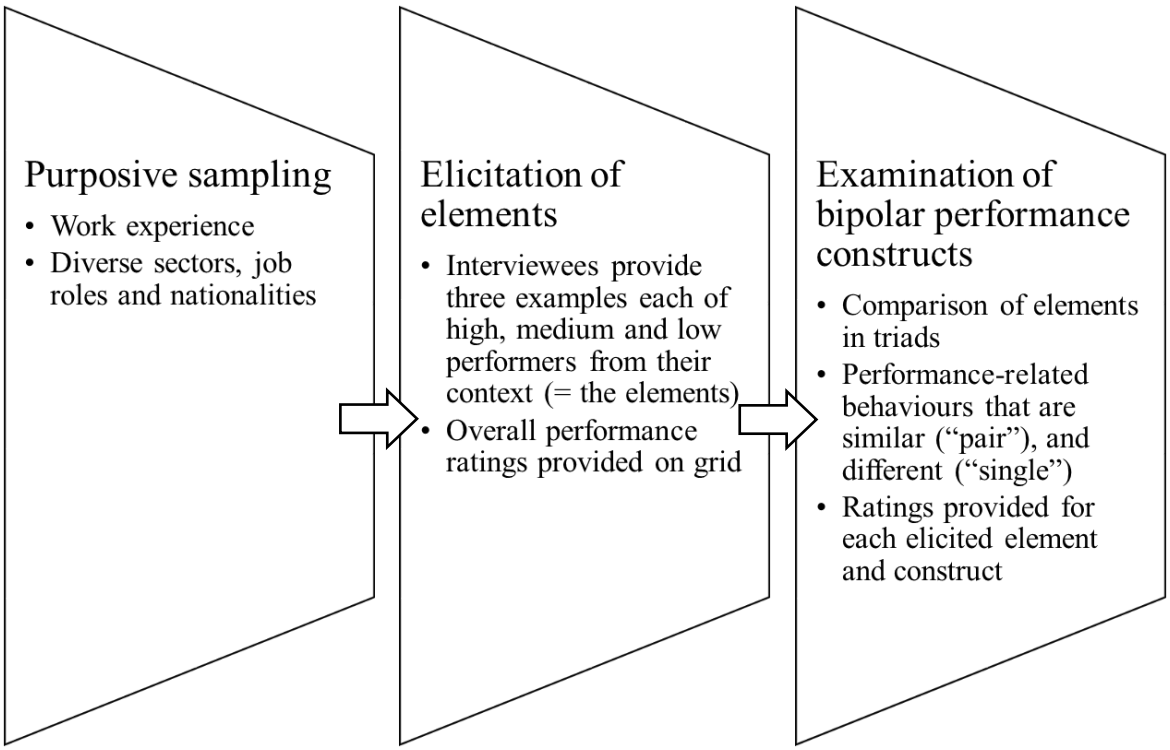

Figure 2 Overview of overall approach to data collection using the RGT

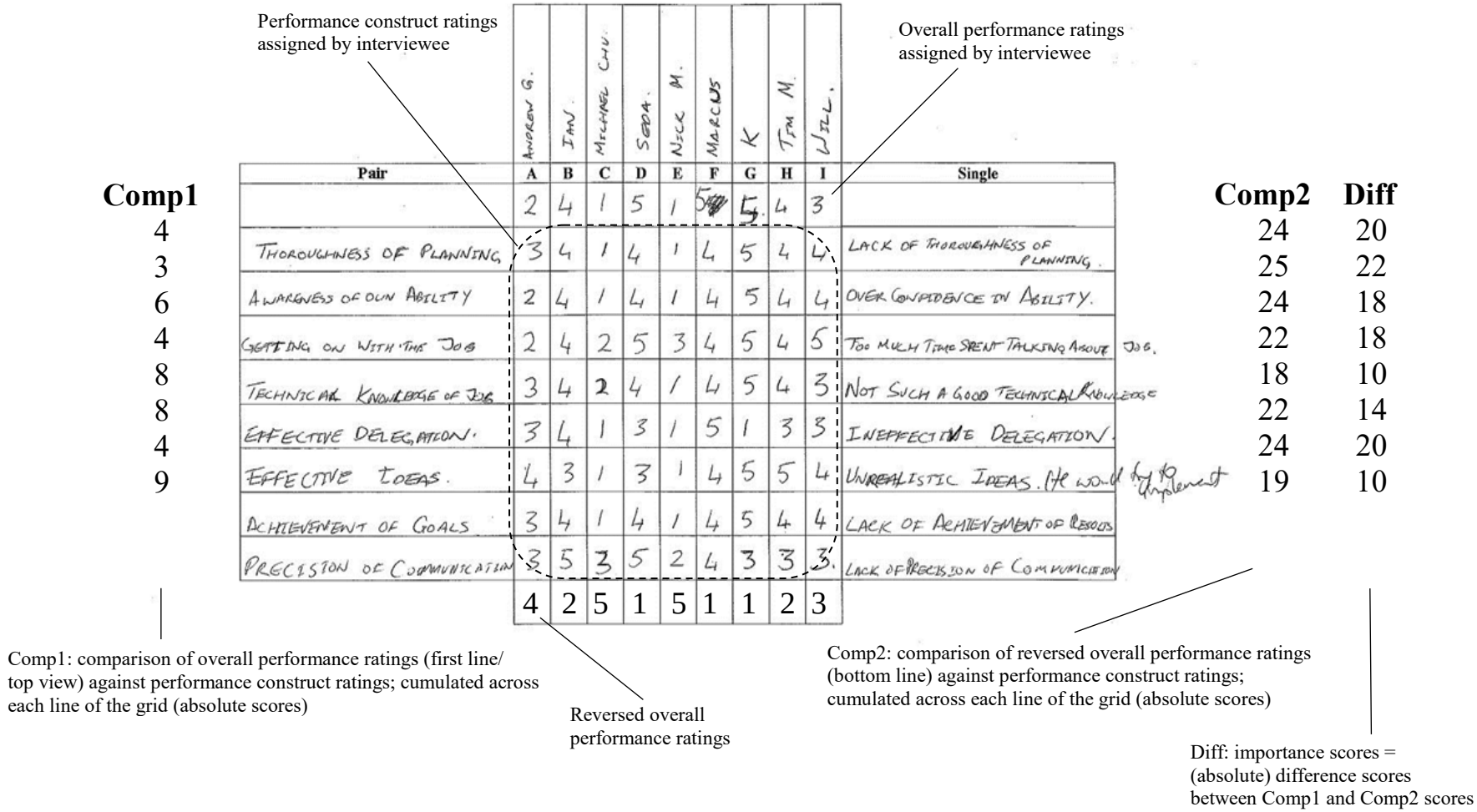

Figure 3 Annotated example of completed grid