This sixth article in the Performance Technologist’s Toolbox series focuses on the critical incident method of data collection. Critical incidents are narrative descriptions of important events that occur on the job and how employees behave in those situations. Critical incidents document the work context, the specific situation that arose, the persons involved, each person’s actions, and the results. The incidents may be confined to a particular topic or may cover the breadth of work experience. John Flanagan pioneered the critical incident technique during World War II as a means of collecting information about the training needs of pilots. Interviewees were asked to describe key successful and unsuccessful events that had occurred on the job (Hoge, Tondora, & Marrelli, 2005; Rothwell & Kazanas, 1992).

For example, below is an actual critical incident that was captured for an employee relations case in a medium-sized organization.

Jack leads a team of 40 consultants in a private sector firm that provides management consulting services. Linda, one of the consultants, had been performing poorly for about a year, but both Jack and her direct manager, Larry, were reluctant to address the issue because on the few occasions they had tried to do so in the past, Linda had become very upset. Linda, in fact, had asked Jack if she could be assigned to a new manager. He assigned her to Amy, a senior consultant who was respected for her managerial abilities. Amy initiated biweekly meetings with Linda to monitor her progress and provide coaching and feedback. She also worked with Linda to create and implement a performance improvement plan.

When the time came for Linda’s annual performance evaluation, Amy prepared a thorough and candid evaluation, including both Linda’s successes and performance improvement needs. She reviewed the evaluation with Jack, who approved it. As was the practice in the firm, Amy then orally presented the evaluation to a review team of 10 senior managers. As she was making the presentation, Jack interrupted her and stated that the evaluation was not accurate. Amy began to explain that he had approved the evaluation and that she had secured agreement from Linda’s primary project manager for the rating she was proposing. Jack continued to interrupt. The vice president instructed Jack to address the disagreement outside the meeting. After the meeting, Jack stormed into Amy’s office, slammed the door, and started shouting that Amy had “trashed” Linda. Amy replied that the evaluation was accurate and that Jack had approved it. Jack claimed that Amy had used the wrong tone of voice in presenting the evaluation and had done Linda a grave disservice. He also shouted that he would never recommend Amy for a promotion to the senior leadership position to which she had applied. Two days later, Amy filed a complaint with the human resources department and later left the firm.
Collection of Critical Incidents

Information about critical incidents in an organization, such as this example, can be collected through several different vehicles. These include focus groups, individual interviews, surveys, performance records, and work diaries.

Focus Groups

In focus groups, a facilitator leads a small group of people in a structured discussion to identify and describe specific examples of past performance. The discussion may be focused on one or more targeted areas of performance or on the job as a whole. For example, in a study my colleagues and I conducted at an aerospace firm to identify management development needs, we conducted focus groups with employees to ask them to provide examples of how their supervisors helped employees do their best work and examples of situations in which their supervisors made the employees’ jobs more difficult.

Interviews

A common method of collecting critical incidents is through individual interviews. The interviewer will ask the interviewee to orally recount an example of a time the interviewee faced a particular situation. For example, the interviewer may ask, “Could you give me an example of how you coped with a very heavy workload?” As the interviewee responds, the interviewer will probe to ensure all the needed information is obtained.

An example of the use of interviews to collect critical incidents is the Behavioral Event Interview (BEI), first developed by David McClelland and his colleague C. Dailey and based on John Flanagan’s critical incident technique. The BEI is commonly used in competency modeling studies. Top performers are individually interviewed to identify the behaviors that are critical to their success in challenging situations. The interviewer will ask questions such as “Tell me about a time when you were given an extremely challenging assignment” or “Give me an example of a situation at work in which you had to make a difficult ethical decision.” The interviewer asks the performers what they did, thought, said, and felt, and the results. The competencies critical to their success are inferred from the information supplied. Average and below average performers may also be interviewed to provide comparison points (Marrelli, Tondora, & Hoge, 2005).

Surveys

Surveys are another common approach to collecting critical incidents. The surveys can be administered in print or online; the employees completing the surveys may be assembled together in a room, or they may complete the survey on their own. The critical incidents are obtained by providing a series of structured questions. By answering the questions, the employee is providing a critical incident. For example, employees may be asked to describe a situation in which they managed multiple, competing priorities. They might then be asked the following questions:

• Please briefly describe the situation.
• Who was involved?
• What did you do?
• What did you say and to whom?
• What was the result?
• Would you do anything differently now?
• What did you learn?

Critical incidents...can be collected through... focus groups, individual interviews, surveys, performance records, and work diaries.

Performance Records

Another source of critical incidents is existing performance records. For example, critical incidents focused on leadership and employee satisfaction issues are often available in large organizations from the employee relations department or the office of the ombudsperson. Exit interviews and performance appraisals are other potential sources of critical incidents. All personal data, of course, must be expunged from these incidents before they can be used, but they can offer valuable insights into problems the organization faces.

Work Diaries

Employees or their supervisors are asked to record incidents of successes or failures as they occur during the work day. The incidents are recorded in a diary-type log that is kept daily or weekly and classified under pre-specified dimensions such as following up on sales calls or communicating customer information (Schermirhorn, Hunt, & Osborn, 2000).

Applications of Critical Incidents to Performance Technology

Several applications of critical incidents to performance technology are described on the following pages.

Performance and Cause Analysis

Critical incidents are a useful approach to identifying performance improvement needs and their sources. They
provide a rich, in-depth perspective of life in an organization that is usually not apparent through more quantitative methods of data collection. For example, a few years ago I led a research team in uncovering the causes of ineffective leadership in a large, global organization. Critical incidents were one of the data collection methods we used. We collected incidents through the performance records retained by the employee relations office and the office of the ombudsperson as well as through focus groups with employee relations staff and interviews with leaders at all levels, from first-line supervisors through executive vice presidents. The critical incidents clearly highlighted the numerous and complex problems and obstacles leaders faced on a day-to-day basis in managing employees and provided insight into the causes of those problems.

Critical incidents are an effective vehicle for understanding the personal, dramatic impact of an intervention that may not be apparent through quantitative methods of data collection.

Organizational Development

Critical incidents are a primary focus of data collection in appreciative inquiry. This approach to organizational development identifies what has been working well in an organization and then determines how to routinely repeat and expand on those successes. In a series of facilitated workshops, participants cite critical incidents of successes. Organizational goals are then defined based on these peak moments, and a program is designed to harness the energy of the organizational members to increase the number and impact of these moments so they become a way of life (Hammond, 1998).

Another application of critical incidents is in the knowledge-sharing processes across an organization. Many large organizations have installed electronic knowledge management systems to which employees are encouraged to contribute critical incidents from their daily work experiences. These incidents become part of organizational knowledge so successes can be repeated and future mistakes can be avoided. Some organizations also hold regular meetings in which employees may share, in person or via video conferencing, their triumphs and tribulations (Meister, 1994).

Instructional Design

Critical incidents are sometimes used to identify the learning needs of employees. One approach is to ask experienced performers or their immediate supervisors to share anecdotes from their own experience about situations in which performers must make crucially important decisions. Another approach is to ask for examples of the most common situations or problems the targeted employees face. In either approach, common themes across all the anecdotes are identified, and these become the key topics for training (Rothwell & Kazanas, 1992).

Critical incidents are also often used as the basis for case studies, both in classroom and in online learning. Case studies are an effective educational technique because they provide students with realistic practice in solving the problems they will encounter on the job (Schank, 1997).

Evaluation

Critical incidents are an effective vehicle for understanding the personal, dramatic impact of an intervention that may not be apparent through quantitative methods of data collection. For example, a nurse may cite an incident in which having medical information available through a bedside records management system (designed to file and retrieve patient lab reports, vital records, doctors’ notes, allergy reports, and so on) saved a patient’s life (Marrelli, 1990).

Performance Management

A key responsibility of managers is to routinely document the performance of their employees for use in performance appraisal. Managers should record, on an ongoing basis, both positive and negative critical incidents in which their employees are involved. Then, at formal appraisal times, the managers have behavioral records with which to create a fair and balanced performance evaluation that covers the entire performance period rather than the last few months that are uppermost in the manager’s memory.

Critical incidents are also a valuable approach for employee development and feedback (Schermernhorn et al., 2000) because they provide specific examples of the employee’s actual behavior. Employees are much more likely to accept and apply the feedback if it is based on concrete examples than if the feedback is general and abstract.

Assessment

Critical incidents are commonly used to develop behaviorally anchored rating scales, which may be used in observational research, competency assessment in training, or performance evaluation. Descriptions of both effective and ineffective performance may be collected from employees,
their managers, or human resource specialists. After a large sample of incidents is collected, the incidents are grouped into similar behaviors, and each behavior is evaluated to determine the extent to which it indicates desirable or undesirable performance. A rating scale is then created in which the anchors are specific examples of behavior. The anchors are arranged along a continuum indicating increasingly effective or ineffective performance (Schermherhorn et al., 2000).

**Competency Modeling**

Critical incidents are a valuable tool in competency modeling. As mentioned above, the BEI is an important technique for identifying the competencies required for superior performance. In a current competency modeling study for mental health clinic directors, I am gathering critical incidents through a survey. A preliminary list of competencies was created based on a review of job documentation and focus groups with directors and their managers and supervisees. The clinic directors will next complete a survey asking them to rate the importance of each competency and to provide a critical incident demonstrating the application of each competency on the job. The survey will be administered in a group setting to encourage participation and prompt completion.

**Competency Assessment**

Critical incidents can be a helpful resource in developing competency assessments. The incidents can be used as the basis for the content of the assessment items. For example, I have used critical incidents to develop online competency assessments for elementary school teachers of their application of technology to classroom instruction and management. My team and I conducted workshops with the teachers in which we asked them to write examples of how they or their colleagues have used technology on the job. The teachers were divided into groups, and each group was asked to provide examples related to specific areas of technology use, such as special education, communication to parents, instructional design, and so on. Each incident was transformed into a case study–type assessment item with a scenario and several attached questions.

**Advantages and Disadvantages**

**Advantages**

- Critical incidents provide dramatic demonstrations of the impact of behavior. They spark interest in a report or presentation because they give real-life examples. They provide the human story behind research findings or organizational decisions (Marrelli, 1990).
- When the data are collected through an anonymous survey approach, critical incidents allow the performance technologist to obtain emotion-laden data about individuals’ private thoughts, feelings, and actions while protecting their identity (Worthen & Sanders, 1973).
- Critical incidents provide rich, in-depth data at a much lower cost than observations (Worthen & Sanders, 1973).
- They are easy and economical to develop and administer.
- Many people enjoy sharing stories of their work experiences. They like to feel that they are being heard and their experiences are deemed important. Therefore, it is usually not difficult to persuade people to participate in a data collection effort.
- Critical incidents can measure abstract constructs such as motivation through their demonstration in reported behavior. These constructs can be difficult to assess with other data collection methods.

**Disadvantages**

- In critical incidents, reports of behavior are filtered through the lenses of individuals’ perceptions, memory, honesty, and biases, and therefore may not be entirely accurate (Marrelli, 1990; Worthen & Sanders, 1973).
- It can be time-consuming and laborious to summarize and analyze the data (Marrelli, 1990).
- It can be difficult to convince people to share their critical incidents through a survey because they are reluctant to expend the effort required to write their own stories. More labor intensive and expensive interviews and focus groups are often more successful approaches.
- Critical incidents provide a personal perspective of organizational issues. They need to be combined with other methods of data collection for a more comprehensive understanding of a situation.

**Guidelines for Collecting and Using Critical Incidents**

- The key to collecting useful critical incidents is to ask the right questions. Be sure to provide a structured set of questions to guide your respondents through the process of telling their stories. Keep the questions simple and direct.
- People are often much more willing to provide candid accounts of their experiences if they are assured of anonymity, or at least confidentiality. In a survey, do not ask them to attach their names to their incidents unless you think you will need to follow up with them. In a focus group, do not record the names of those who share incidents.
- As with any other data collection method, it is essential to pilot test and then refine your approach.

**Conclusion**

Critical incidents provide a rich, personal perspective of life in an organization that facilitates understanding of the issues and obstacles people face and illuminates potential avenues for improvement. Critical incidents offer a versatile
method of data collection that can be effectively applied in a wide range of situations. They provide a fun and fascinating addition to the performance technologist's toolkit.

References


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