

# Research Spotlight

MAY 2006

## Critical Incident Technique: A Valuable Research Tool for Early Intervention

Researchers at the National Early Childhood Transition Center (NECTC) are using a research method known as Critical Incident Technique (CIT, Flanagan, 1954) as a way to gather specific information on the transition process for children with disabilities as they exit early intervention and preschool programs. The CIT method offers a unique opportunity to identify effective and ineffective practices in the area of early childhood transition by recording key incidents from the perspective of service providers (e.g., teachers, service coordinators, etc.), local and state administrators, and parents of young children that have experienced a transition.

CIT was developed by John Flanagan (1954) as a method to identify behaviors that contribute to the success or failure of individuals or organizations in specific situations. The Society of Industrial and Organizational Psychology has recognized Flanagan's 1954 CIT article as the most frequently cited article in the field of industrial and organizational psychology (American Institutes for Research, 1998).

### **The Critical Incident Process**

John Flanagan developed and introduced Critical Incident Technique in 1954. The development of CIT grew out of a series of studies to improve military flight training during Flanagan's work with US Army Air Forces during World War II. CIT is now widely used in a number of fields, including education, business and medicine.

Flanagan described an "incident" as "any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act" (p. 327). When using CIT, the researcher selects data sources (respondents or participants) based on their ability to make first-hand observations related to the area under study. The number of incidents reported when using CIT varies according to the number of respondents. When determining participants for a study using CIT, specific information related to the frequency of the interaction with study participants is a critical factor. The frequency can range widely from a single self-report, survey or interview at the end of a specified period, to a long term study that involves regular or irregular contacts with participants on a regular basis (e.g., weekly, daily).

In using CIT, participants focus on specific situations within a set of criteria significant to the situation, referred to as *critical incidents*. These incidents generally focus on: 1) describing a particular situation; 2) accounting for the behavior and actions of key players during the situation; and 3) reflection on the outcome or responses to the interaction or situation (Flanagan, 1954). When using CIT, Flanagan (1954) further delineates two underlying principles and five specific components to be included. Principles include a focus on a preference for the reporting of facts according to those participating in the study versus general impressions and reporting only those behaviors competent observers feel contribute to the activity under study. The components of implementation include: 1) defining the behavior to be described; 2) determining the specific situations or incidents through which this behavior can be generated; 3) establishing data collection processes and methods and data analysis procedures; and 4) conducting the analysis.

Prepared by:  
Dr. Beth Rous  
University of Kentucky

Dr. Katherine McCormick  
University of Kentucky

The American Institutes for Research (1998) identified several questions that can help in identifying a critical incident:

- ◆ What preceded and contributed to the incident?
- ◆ What did the person or people do or not do that had an effect?
- ◆ What was the outcome or result?
- ◆ What made this action effective or ineffective?
- ◆ What could have made the action more effective?

Methods for collecting the data can include questionnaires and/or interviews (individual or group). No matter which method is selected, researchers should include enough contextual information to encourage participants to recall a particular situation or instance related to the topic of study.

In 1964, Flanagan offered a nine step inductive process for analyzing critical incidents. These steps include:

1. Select a general frame of reference
2. Sort a sample of incidents
3. Formulate tentative headings
4. Sort additional incidents into areas, formulating new categories and sub-categories as necessary
5. Clip similar statements together
6. After most have been classified, prepare tentative definitions for general headings and categories.
7. Make tentative selection of level of specificity-generality to be used; redefine as necessary
8. Record each classification on back of card
9. Have an independent check made on classification of all incidents

#### **How NECTC Is Using CIT**

NECTC is using Critical Incident Technique to determine effective transition practices at state and local levels and understand how transition practices support children and families in being successful once they begin school. Information is being collected over a four-year period by survey and is entitled: "Tell Us Your Transition Story". Multiple formats are available to participants. A web-based and paper version of the survey is available in both English and Spanish. Participants are also offered the opportunity to record their transition story, which is then transcribed and entered into the data system and incentives are provided.

To solicit stories, NECTC staff and other collaborators have used "Tell Us Your Transition Story" booths at state and national conferences. Potential participants are provided with general information about the study and the multiple ways in which they can share their stories. A computer is available to allow participants to submit a story, an audio tape recorder is available for those that prefer to verbally tell their story and paper copies are available for those that prefer to write their story.

#### **Summary**

Transition is a complex process that involves multiple players and perspectives. The value of CIT for studies of transition and other early intervention practice lies in its potential to help researchers identify and understand the variables critical to complex behavior and interactions. It provides an opportunity to include diverse voices from the grassroots.

CIT is being used by others in the field of education to study complex phenomenon. Examples include the following.

The **National Assistive Technology Research Institute (NATRI)**, funded by a cooperative agreement from the Research to Practice Division of OSEP, is using CIT to gather information on the use of assistive technology (AT) services in schools. For more information contact Ted Hasselbring, Ed Blackhurst, or Margaret Bausch at <http://natri.uky.edu>

**Hilton/Early Head Start Training Program**, Special Quest Family Stories provide a mechanism to record the experiences, successes and challenges of families of young children with disabilities in order to prepare coordinated services, resources, and supports and to provide support and inspiration to other families and providers. The program is called *Story Collector* and can be accessed at <http://www.specialquest.org/story>

### For More Information

CIT has been used both within and outside the field of education, including the fields of medicine and business. Samples of studies that have used CIT include:

- Blase, J. & Blase, J. (1999). Principals' instructional leadership and teacher development: Teachers' perspectives. *Educational Administration Quarterly*, 35(3), 349-379.
- Homes, D., Bruce, M., Karen, V. & Hennen, B. (1990) Defining fitness and aptitude to practice medicine, *Medical Teacher*, 12, 181-191.
- Johnson, B.L., & Fauske, J. R. (2000). Principals and the political economy of environmental enactment. *Educational Administration Quarterly*, 36(2), 159-185.
- Redden, M. R. & Blackhurst, A. E. (1978). Mainstreaming competency specifications for elementary teachers. *Exceptional Children*, 44, 615-617.
- Rous, B. (2004). Teacher perspectives of instructional supervision and behaviors that support preschool instruction. *Journal of Early Intervention*, 26(4), 266-283.
- Ruyter, K., Wetzels, M. & Birgelen, M. (1999). How do customers react to critical service encounters?: A cross-sectional perspective. *Total Quality Management*, 10(8), 1131 - 1146.

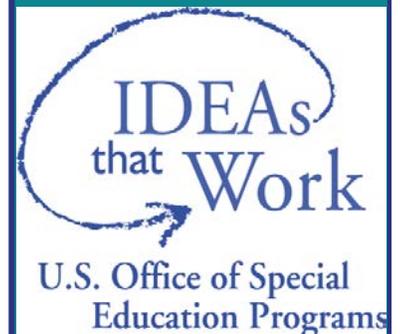
### References

- American Institutes for Research. (1998). *The critical incident technique*. Retrieved July, 1998, from <http://www.air.org/airweb/about/critical.html>
- Flanagan, J.C. (1954). The Critical Incident Technique. *Psychological Bulletin*, 51(4), 327-358
- Flanagan, J. C. (1964). *Measuring human performance*. Pittsburgh, PA: American Institutes for Research.

### Other NECTC Research Initiatives

- ◆ **National Focus Group** Sessions with practitioners, families and administrators to identify the successful transition practices.
- ◆ **Regional Working Forums** to identify barriers and assess transition strategies and practices for children with significant disabilities and those from diverse backgrounds.
- ◆ **Research Synthesis** to describe the current status of scientifically based transition practices.
- ◆ **A National Survey** of preschool teachers to identify the current use of transition practices.
- ◆ **A National Survey** to determine the status of the state level transition policies, procedures, and infrastructures in each of the 50 states and the District of Columbia.
- ◆ **A Conceptual Framework** to guide transition research and practice for young children with disabilities

*Improving the transition process for young children, their families and the professionals who work with them through an examination of factors that promote successful transitions between infant/toddler programs, preschool programs, and public school programs for young children with disabilities and their families.*



NECTC was funded by the U.S. Department of Education, Office of Special Education Programs, Cooperative Agreement # H324V020003.