Chapter 13
Collaboration as Co–Constructed Discourse: Developing a Coding Guide for the Analysis of Peer Talk During Educational Information Seeking

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ABSTRACT
This chapter presents a coding guide for the analysis of peer talk during educational information seeking. The guide is an outcome of a structuring content analysis of learners’ dialogues as they seek, evaluate, and use information on a collaborative basis. The analysis is informed by a language-based theory of learning and the sequential organization of spoken discourse. The generic steps of a structuring content analysis are described first; before each step, sequence, exchange, and move type identified in the dialogues are described. Illustrative examples of each unit and type of talk are provided, so as to aid in the precise and reliable assignment of the categories and codes in further studies. The chapter concludes with implications of the coding guide, and the broader study of which it is a part, for research in educational information seeking.

INTRODUCTION
Educational settings are one of a range of contexts in which studies of collaborative information behavior have been conducted. In such settings students are often presented with a learning activity designed to motivate them to seek, evaluate, and use information on a collaborative basis. Designing and facilitating learning activities that encourage collaboration during information seeking transforms the relationship between learners and information by introducing the role of the peer as an important influence on the identification and negotiation of information needs, the development of search strategies, and the sharing, evaluation, and use of the information once retrieved. In doing so a new set of factors enters into the student-information relationship. These include the deployment of social and interpersonal skills, discussion skills, and the use of technology that enable learners to search, share, evaluate, and present information on a collaborative basis.

One of the mediating tools that learners use to seek, evaluate and present information together is talk. This is because it is through talk that learners interpret and negotiate their information needs, de-
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dvelop their search terms and strategies; and evaluate the pertinence of the documents found to the task at hand. While a number of studies have explored the role of talk in information seeking (e.g. Belkin & Vickery, 1985; Saracevic, Spink, & Wu, 1997; Ellis et al., 2002; Wu, 2005), there have been very few empirical analyses of talk in settings of collaborative information seeking (Foster, 2009). At the core of such analyses is the task of coding and categorization. A choice facing the discourse analyst at this point is whether the codes and categories are informed by a pre-established set of theoretical categories and codes; or whether the codes and categories are developed from the ground up on the basis of an examination of the materials. The decision made will be influenced of course by the goals and methodology of the particular research study. Foster (2009) presented an analysis of the functions and forms of talk used by learners as they collectively reviewed information shared and interpreted as part of a collaborative learning activity. The study took the form of a structuring content analysis of the learners’ dialogues; and was informed by an analytical framework called the “sequential organization of spoken discourse” (see Wells (1999) for the original framework; and Appendix A for a revision of the framework used in the current study). This chapter elaborates on the study by presenting a coding guide for the analysis of peer talk during educational information seeking. After an overview of the generic steps of a structuring content analysis, the chapter focuses on a detailed description of the codes and categories used in analyzing the organization of peer talk during educational information seeking. The chapter concludes with remarks on the implications of the guide, and the study of which it is a part, for analyzing talk during educational information seeking.

STRUCTURING CONTENT ANALYSIS

The aim of a structuring content analysis is to filter out and (re-) assemble certain themes, content, and aspects from the materials used. The content of the materials is (re-) structured, ordered, and analyzed in accordance with a theoretically informed system of categories, and a coding guide results that enables the precise coding of similar materials in the future. The technique can be described in the following way:

“Structuring content analysis seeks to filter out particular aspects of the material and to make a cross-section of the material under ordering criteria that are strictly determined in advance, or to assess the material according to particular criteria. This involves formal, content-focused, typologizing and scaling procedures, depending on the type of structuring dimensions that have been developed in accordance with some theory, and these are then subdivided into individual categories. The basic idea in this is the exact formulation of definitions, typical textual passages (‘key examples’) and coding rules which will result in a coding guide that makes the task of structuring very precise” (Mayring, 2004: 269).

As this definition implies it is possible to conduct different structuring content analyses depending on the theoretical criteria used to inform an analysis of the materials. In this instance a framework developed for the analysis of educational discourse informed the task of coding and categorization. An overview of the generic steps of a structuring content analysis is provided here (see Mayring (2003) for a diagrammatic presentation of the steps). At Step 1 the content analyst determines the materials to be used. In this instance the materials used originate from a study investigating the functions and forms of talk used by students when seeking information as part of a collaborative learning activity known as group investigation (Sharan & Sharan, 1992). Group investigation is a cooperative learning method that encourages students to acquire knowledge within a social context of accountability. A typical group investigation will proceed through six stages. Stage 1: class determines subtopics; Stage 2: groups plan their investigations; Stage 3: groups carry out their investigations; Stage 4: groups plan their presentations; Stage 5: groups make their presentations; Stage 6: teacher and students evaluate their projects. Each stage also incorporates an information task (Foster, 2007, 2009). The module