Chapter 6
Creating Effective Communication among User-Centered Technology Design Groups
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ABSTRACT
The user-centered design process among U.S. companies is commonly carried out by design teams. Groups of designers are commonly unable to create high quality work due to the need to first work out several issues. These issues include needing to get to know one another’s capabilities while also learning how to effectively communicate through the many difficult decisions and deadlines common to software and Web design projects. This chapter describes the communication research that illuminates the process that groups go through before they can achieve high-quality results.

INTRODUCTION
The user-centered design process among U.S. companies is commonly accomplished as a team project. Technology design and development has become so complex that multiple individuals are needed to meet the needs of engineering, graphics, and user-centered design. For example, one enterprise website update might require several engineers who each specialize in one of many potential coding languages. Several user-centered design specialists might also be required, including one to deal with the information architecture and another who researches and creates effective user experience designs. Because many user-centered technology projects involve collaboration and cooperation of a group of experts, each team much learn to work together by communicating effectively.

Such a diverse group of people needs to devote time and energy in order to become an effective team. Research from small group communication and technology education can help explain the process and difficulties that may arise before a group becomes effective enough to create high quality output. This research illuminates the idea...
that effective user-centered design is much more complex than simply putting experts together. Instead, effective teamwork requires time and development of several communication behaviors, including identity formation, helping, negotiating, and group process. This chapter will describe research relevant to technology design teams as they attempt to navigate the opportunities and challenges that face them as they meet the needs and expectations given them.

The Nature of Communication

The approach to communication for this chapter is one that takes into account the context in which it takes place. This is a stance where one must know who the speaker and the hearer are and when and where the communication takes place. This idea is unlike the ways people make contact over the telephone, or radio and television. This view emphasizes the channels for transmitting and receiving messages. However, I am using a description of communication that also means interaction, and communication and interaction are used interchangeably in this chapter.

When a speaker utters a phrase that has some message value and does so in a particular social situation and at a point in the stream of a conversation, the speaker is both communicating and interacting (Ellis & Fisher, 1994). She is communicating because the words carry meaning and content and interacting because the meanings function to express social relationships. It is impossible to one during group communication without the other.

Yet, design team members have their autonomy and often choose to engage in some communication behaviors and not in others during certain situations. Each member is capable of free will and choice. This choice is not random; instead, each member chooses to behave on what is considered appropriate in a given situation. Often, choice to participate is limited in the sense that many alternatives are eliminated based on past exchanges. Team members may not be aware of these constraints, but they submit to them anyway. For example, they speak in a way common to the design team using the specific rules of syntax and meaning that conforms to those rules, even though they may not be aware of the rules that constrain their choices.

Because members of a design team are professionals wishing to find success in their work, they often honor the constraints placed upon their communicative acts. Design team managers would be wise to consider this reality, and should create a space of open and honest communication that allows for a developing interaction that promotes creativity.

HISTORY OF COMMUNICATION RESEARCH ON TEAM PROCESS

Groups go through stages of development and abilities before they can make effective decisions and accomplish high quality tasks. Communication scholars have long studied the characteristics involved with successful group work. Much of this work was in line with a positivist viewpoint emphasizing control and precision while favoring the laboratory experiment over naturalistic data collection strategies. However, this important research did find that group work and collaboration does not come easy. Rather, it requires time and development of several communication behaviors before high quality decisions and task outcomes become apparent.

Group process is the term used to describe the stages that teams go through before achieving high quality output. Several early pundits identified stages of group development from the vast small group communication research during the first half of the twentieth century. For example, Charrier (1974), an employee of Proctor and Gamble, wrote a summary of group development based on earlier laboratory work. The original document was written to help group managers