a

b

c

d

e

f

Figure 6.2a–f Examples of some Action categories selected from videotapes.
a Demonstrating function: therapist applies force to the leg of another therapist to illustrate how the client's leg should be positioned by the seating.
b Gesture: engineer points to the component held by the orthotist as he responds to a question asked by the client (out of the picture).
c Measuring: engineer uses his open hands to indicate a width of the easel to support the laptop computer.
d Measuring and locating: engineer illustrates proposed location and size of the component to secure an oxygen cylinder to the frame of a wheelchair.
e Constructing: technicians use some wood blocks and a hand to mock up an oxygen cylinder support in a wheelchair.
f *Multiple acting*. Constructing: orthotist (foreground) mocks up a strap attachment for a chest harness. Locating/indicating: physiotherapist (standing on the left) traces proposed trim line for the headrest with finger. Demonstrating a feature: client's father (sitting, at top) illustrates how a chest harness strap was positioned in an earlier design of seating system.

Table 6.3. Categories developed to classify the talk that participants use with design

Talk category	Defining feature
Design proposal	Contains data and concepts to specify a physical requirement to be constructed.
Dimension/location	An actual dimension or estimation of size, position, orientation of something that has design relevance and may be included in the completed construction.
Explanation	A response to a question or statement by another participant that provides additional information or should enhance understanding.
Information client	Information and data about the client's body that is important to the design.
Information physical	Information about the physical environment of the client, including equipment that is important to the design.
Comment	An unsolicited utterance that may provide additional information or be an opinion, or observation.
Question	An indication that something is unknown and should be known.

of classification of talk and action, and other details in each event. The correspondence of the test coders with the author ranged from 51% to 83%, with an average of 66%. The coding of all the videotape data was performed by one of the authors (G.D.L). The reliability of the refining of the raw data was tested by retranscribing and recategorizing videotapes and comparing the second pass check with the first pass records. It was found that 10% of events required some reassignment of a data entry. The talk and action data that was extracted from the videotapes was stored in a relational database.

A Sample Exploratory Analysis of a Videotape

Exploratory analyses of videotapes were conducted to provide an insight into talk and action. Each videotape was reviewed by précising sequentially the major occurrences, which involve artefacts and action or provide significant information that was relevant to design during the Seating Clinic. It was observed that the introduction of artefacts into the REC team usually started an investigation or a series of question–answer interactions by participants that revealed useful data, understanding and ideas. An example of a design activity segment analysis from a videotape is presented in the following section.

Nicholas' "final design" segment

Nicholas is a teenage boy born with congenital amputations of his arms and his right leg. His left leg is an incomplete limb, resembling a flipper, that can be moved and controlled, but which is incapable of load bearing. Nicholas can move independently by bottom shuffling. He also uses a power wheelchair that has powered vertical movement of the wheelchair seat. Nicholas can shuffle in and out at floor level and raise the seat to a convenient height