We saw in the previous chapter how understanding that the computer is a medium, not just a tool, reveals film theory’s relevance to the discussion of computer interface design. Since the computer as a medium is in an early stage of development, some interface designers have looked towards film for structural models and specific techniques. Computer applications such as Macromedia’s Director, the dominant multimedia authoring program, explicitly employ the film metaphor, both in its conceptual design and its use of terminology such as scene, script, score, and stage. Additionally, computer applications increasingly draw on digitized film and some simple elements of its grammar, such as transitions, framing, camera movement and camera angles. A more mature medium, film may supply some of the best approaches to computer interface design.

Lydia Plowman (1994) notes similarities between early film and interactive multimedia in establishment of narrative conventions such as intertitles and narration. According to Plowman, the audience needs to make a cognitive shift in order to adapt to new media. She quotes Noel Burch (1981) in describing the transition from early to mature forms of film involving a linearization of the narrative. Early film emphasized spectacle and the documentation of unrelated events. Events and
individual shots were not woven into a coherent narrative until D.W. Griffith and others led the way to the development of montage and a cinematic narrative language. Plowman argues that this same process of making new media more coherent needs to occur to increase the educational effectiveness of computer-based programs.

Furthermore, computer instructional designers do not have ready access to an established narrative language and consequently need to be more explicit in their structure. The audience’s knowledge of film conventions allows the authors to feel confident that their narrative can be quickly and simply understood. Consequently, Plowman argues that instructional designers need to spend time developing narrative conventions and make narrative elements clear to the learners. In this chapter we look at narrative or dramatic structure and image order (editing) in film and other media and point out key issues in the use of sequence strategies in the design of computer-based educational environments.

**USE OF DRAMATIC STRUCTURE**

Brenda Laurel and Janet Murray offer some of the most intriguing theories about the use of dramatic structure in computer software. In *Computers as Theatre* (1993), Brenda Laurel examines how computer interfaces might be best constructed as dramas in the tradition of Aristotle’s theories as represented in the *Poetics*. As is my position in this book, Laurel sees the computer as a medium, not a tool. Consequently, the computer environment needs to be analyzed in regard to specific principles as a new medium, just as occurred in the development of photography and film. Laurel defines theatre as representing whole actions by multiple agents; she draws a direct analogy to computer interface design, with direct manipulation or engagement a key aspect of interactivity in the computer. For Laurel, there are two primary advantages to thinking about computers as theater: significant overlap of actions through the use of agents, and the familiar and evocative nature of theater in the interface. Here Laurel’s notion of the “familiar” intersects with notions from cultural psychology of an established canon all members refer to when interpreting stories. Laurel distinguishes “drama” from “narrative” by stating that drama is more active, intense, and has greater unity of action in the Aristotelian sense. She concludes that interface design should focus on action.

Janet Murray (1997) argues that stories define how we think, play, and understand our lives, and sees computers as having a profound affect on the collective cultural stories created in the late 20th century. Murray asks a key question about the use of stories in interactive computer environments: How can
Intelligent Virtual Assistant's Impact on Technical Proficiency within Virtual Teams
www.igi-global.com/article/intelligent-virtual-assistants-impact-on-technical-proficiency-within-virtual-teams/188428?camid=4v1a

Personal Smartphones in Primary School: Devices for a PLE?
www.igi-global.com/article/personal-smartphones-primary-school/60127?camid=4v1a