HANDBOOK OF RESEARCH ON

COMPUTER MEDIATED COMMUNICATION

Sigrid Kelsey & Kirk St.Amant   Volume I

Detailed Table of Contents

Section I
CMC Approaches to Education and Instruction

Volume I

Chapter I

Cheryl Amundsen, Simon Fraser University, Canada
Elahe Sohbat, Simon Fraser University, Canada

This chapter argues for programs that support academics to develop an understanding of the relationship between technology and pedagogy. To lay the groundwork for such an approach, the authors document how nine instructors at two universities integrated a computer conferencing tool into their course design and how their students reported actually using the tool. The data collected from this project was further considered from the perspective of Van Aalst's framework, which provides a way to examine online learning from a communal perspective, and the authors examine the implications this research has for online instruction.

Chapter II

Lesley S. J. Farmer, California State University, USA

An academic librarian, Lesley Farmer explores how librarians can collaborate with teaching faculty by using their expertise with information. Farmer discusses preconditions for successful collaborations-that teaching faculty appreciate the importance of information literacy and that they need to deal with information technology. The chapter discusses how best to achieve technology acceptance in the teaching faculty, applying Bloom's taxonomy of the affective domain. Farmer concludes that librarians and faculty must indeed collaborate to incorporate information literacy and technology into the curriculum.

Robert Jordan, US Bureau of Labor Statistics, USA

This chapter provides a basis for preparing participants for interactive sessions based upon Computer Mediated Communication (CMC). The chapter provides a structured process for ensuring that participants are comfortable and prepared for CMC. A case study is also provided.

Allison V. Level, Colorado State University, USA
Amy E. Hoseth, Colorado State University, USA

This chapter provides an overview of current issues and trends related to the impact and integration of computer mediated communication (CMC) and technological innovation in the teaching and learning environments of higher education in the United States. The authors present information on learning behaviors, learning styles, and CMC as an infrastructure in the student environment.

Bolanle A. Olaniran, Texas Tech University, USA

This chapter examines the use of computer mediated communication (CMC) systems in a teaching setting. The chapter argues for the combination of CMC with traditional face-to-face interactions as the best case scenario for incorporating technologies into network interactions and for facilitating student learning. The author also identifies implications for teachers and students respectively. The chapter then concludes with ideas readers can develop or adapt to their own use and to learn more about this development.

Apryl C. Price, Texas A&M University, USA

Price presents a broad overview of course management systems employed at universities. This chapter functions as a practical guide for anyone wishing to read an unbiased comparison of the most popular course management systems. The chapter goes on to discuss the importance of course management systems as a vital computer mediated communication tool, particularly for distance students. The chapter also details how course management systems have been integrated into traditional campus courses to enhance communication as well as to transform courses into hybrid online-in class courses.

Ruth applies Burke's dramatistic analysis using the Pentad (Act, Scene, Agent, Agency, Purpose) to computer mediated learning environments. The chapter presents an explanation of Burke's Pentad and how it can be applied to computer mediated communication in a learning environment. The chapter's findings pose that Burke's Pentad is a valid framework for analyzing mediated learning environments, and that a pentadic analysis on computer mediated communication and learning environments will provide evidence of the best environments for learning and interaction.

This chapter presents a broad overview of social network analysis, and goes on to explore whether computer mediated communication tools work to increase the overall level of participation in learning groups, in terms of increasing the diversity of relationships within the group. The chapter explores networking ideas such as centrality, density, strong and week ties, homophily, and structural equivalence, and hypothesizes that CMC tools function to support existing social ties, rather than facilitating new ties.

This chapter presents a case study of an e-mentoring relationship in New Zealand between a midwife and two protégés. Computer mediated communication was used in the mentoring relationships to overcome the geographic isolation in the region. The chapter presents examples from the study and suggestions resulting from the experience. Advantages and disadvantages of e-mentoring when compared with face-to-face mentoring are described with suggestions for improving computer mediated communication in a mentoring situation. The chapter can serve as a paradigm for those wishing to incorporate an e-mentoring program.

Vess and Gass examine the growing trend of using podcasting in higher education, discussing a variety of uses for and implications of incorporating podcasts into teaching in higher education. Differences between podcasting and face to face instruction are examined,addressing pedagogical issues concerning the use of podcasting. The chapter also applies traditional educational pedagogical theories, such as learning objects and granularity, too the use of podcasts. Further, the chapter presents a case study

comparing two courses, one utilizing podcasts, and another without, with results of grades and student surveys. The chapter presents recommendations for using podcasting in a university setting, based on previous research and the authors' own experiences.

J. Patrick Williams, College of Staten Island City University of New York, USA
Hsin-Liang Chen, University of Missouri at Columbia, USA

The use of computer mediated communication in higher education is explored, especially the unexpected changes to instructional practices, course dynamics, and student outcomes. For example, instructors finding themselves fulfilling roles such as that of facilitator in synchronous online discussions, content creator, tech support to students struggling with technology, web designer, and more. The presence of computer mediated communication in higher education as improved distance education, and at the same time increases instructor responsibility and complexity in providing successful instructional outcomes. The chapter concludes with key themes affecting the use of computer mediated communication in higher education, providing recommendations and points to think about when implementing CMC.

Stacey L. Connaughton, Rutgers University, USA
Brent D. Ruben, Rutgers University, USA

Technology, communication, leadership, and work processes are inextricably linked in contemporary organizations. An understanding of these topics and an ability to apply these understandings in the workplace is becoming increasingly critical for workers in all sectors. In this chapter, we discuss some of the competencies that are vital for success in the contemporary workplace, and provide a description of one approach to developing these skills: a simulated organization designed to create a dynamic classroom learning environment. We explain how simulations help students develop "real-world" competencies in effective communication and writing practices in mediated and geographically dispersed contexts, and we present how educators, students, and professionals may benefit from this approach.

Kit Hang Leung, McGill University, Canada

This research studies higher order thinking (HOT) processes in asynchronous discussions situated in a campus-based course that involved 11 pairs of graduate students. In these discussions, students examined assessment strategies used for teaching purposes jointly in one week. Taking a grounded theory approach, messages derived from discussions were analyzed with qualitative and quantitative analyses. The unit of analysis was concept. Thinking acts were categorized into communication sequences of initiation, response and comment. These sequences were further categorized with a 5-dimension taxonomy derived from the patterns of these acts observed. Statistical analysis was used to observe the frequency of these

categories, and to validate the categorization consistency among coders. The results strongly suggest that HOT emerges when existing ideas are expanded and changed, and when ideas are expanded, new concepts emerge as these ideas are pondered from a wider perspective. The implication is that online discussion is an effective learning activity when students participate.

Section II
Credibility and Identity in Cyberspace

Chapter XIV

Shawn Apostel, Michigan Technological University, USA
Moe Folk, Michigan Technological University, USA

This chapter traces the reification of book-based evaluation criteria and how its exalted status has been undergirded by a mentality that reinscribes old patterns of credibility onto wholly new entities such as the World Wide Web. Additionally, the authors trace the development and implementation of these book-based criteria from an influential article to their various incarnations in the MLA handbook, an examination that reveals how CMC has been ignored, then sequestered, and ultimately embraced, albeit lukewarmly. Finally, the authors recommend using a rhetorical approach to source evaluation, which can be easily applied to assignments in the composition classroom.

Chapter XV

Erin Bower, Sonoma State University, USA
Karen Brodsky, Sonoma State University, USA

In 1989, the American Library Association issued its Presidential Committee on Information Literacy: Final Report, which was essentially a call-to-arms outlining the necessity of teaching our young people to be information savvy in an information-rich society. This chapter, written from the perspective of two librarians, will argue that a quicker pedagogical revision is needed for teaching undergraduates the concepts of credibility of information created in an era of Computer Mediated Communication. Reviewing some of the major developments that have altered the understanding of credible information, this chapter encourages educators to adopt new approaches to teaching students about the credibility of CMC-generated sources.

Chapter XVI

Kevin Eric DePew, Old Dominion University, USA

This chapter examines the strategies instructors use to compose their instructional identity for online courses. After problematizing the distinction computer-mediated communication applications and digital composing applications, the author explains the benefits and drawbacks of using both types of applications to compose one's identity. To illustrate the strategies that instructors use in academic online contexts,

the author presents two case studies. The chapter concludes with composing strategies for instructors and a future research agenda for the field.

> Gabriel A. Giordano, University of Navarra, Spain
> Jason Stoner, Ohio University, USA
> Robyn L. Brouer, Hofstra University, USA
> Joey F. George, Florida State University, USA

This chapter examines computer negotiations and deception. The authors begin by reviewing past research on negotiations, computer mediated communication, and deception. They then review a current study that investigates both face-to-face and computer-mediated negotiations where deception is present. They conclude by discussing future research directions that will allow understanding in this area to be furthered.

> Gerald S. Greenburg, Ohio State University, USA

This chapter investigates the philosophical significance of computer mediated communication and its impact on communication theory. The author discusses the manner in which CMC has come to be regarded as "cyborg discourse" by some social science theorists - fundamentally different in nature from previous forms of informational exchange. Dissenting opinions in which CMC is viewed as part of a natural evolutionary pattern are also presented. Other issues examined include the question of whether CMC helps us understand what it means to be human, and identification of possible future trends.

> Janice M. Krueger, Clarion University of Pennsylvania, USA

This chapter examines the benefits derived from the use of computer mediated communication features of online courseware for distance education. The author focuses on the building of knowledge and skills of active participants through the collaborative inquiry of discussion forums. Additionally, the author demonstrates how students grow as a community of learners, thereby generating a cohesive group identity. This chapter summarizes how computer mediated communication (CMC) is seen as an effective tool for building the necessary knowledge, skills, disposition, and attitudes needed by candidates of professional programs to discover their professional identity.

> Jo Mackiewicz, Auburn University, USA

Online reviews, evaluations of products and services written by consumers as opposed to professional writers, now appear not only in Web sites devoted to reviews, such as Epinions.com, but also in sites of

purchase, such as Amazon.com. This chapter examines consumers' possible motivations for devoting time and effort toward writing reviews. Prior research on print reviews suggests that reviewers tend to be positive in their evaluations. This chapter analyzed a sample of 640 online reviews to see whether a similar positive bias existed. In addition, this chapter examines a variety of editing strategies that online reviewers used to generate and sustain credibility. The chapter concludes with some ideas for gauging credibility in CMC genres like online reviews, such as analyzing the ways that consumers signal their expertise related to products and services.

Karl-Heinz Renner, Otto-Friedrich University of Bamberg, Germany
Astrid Schütz, Chemnitz University of Technology, Germany

This chapter presents a psychological approach to the effects of personal web site on visitors. The chapter argues that personal web sites are a tool for self-presentation and identity construction, presenting empirical and theoretical points of view. Based on the data, the chapter concludes that personal web sites are primarily used to convey authentic identities and personality traits, and that the popular belief that Web site are narcissistic platforms does not generally apply to the average web site owner.

Per F. V. Hasle, Aalborg University, Denmark
Anne-Kathrine Kjær Christensen, Aalborg University, Denmark

This chapter examines persuasive design, that is, computer mediated persuasive communication. The field is also often designated by the terms persuasive technology or captology. The basic concepts of the field are introduced, and its development since its inception in 1997/1998 is charted. The authors then strive to relate this field more systematically to communication science, and especially rhetoric. It is shown how a 'rhetorical turn' within persuasive design can place the field on a sound communication-theoretic footing.

Joey F. George, Florida State University, USA
Kent Marett, Washington State University, USA

Much research within the field of MIS has been devoted to the use of collaborative technology by decision makers and the impact computer-mediated communication (CMC) has on collaborative work. Yet, there may be some unintended consequences for users of CMC, if someone involved in the joint effort decides to take the opportunity to deceive the others involved. In this chapter, we posit that CMC offers would-be deceivers advantages that otherwise do not exist with more traditional, richer media, using past research and established theories to help explain why. We review some of the findings from our ongoing research effort in this area and explain how difficult it is for computer users to detect deception, when it occurs. Finally, we discuss how the art of deception in computer-mediated collaboration potentially can

affect both the current effort and future efforts of those involved, and we offer our thoughts on some of the factors CMC practitioners should consider when trying to combat computer mediated deception.

Section III
CMC, Community, and Information Exchange

This chapter examines utility of pairing two forms of digital data collection – network analysis and electronic interviewing – to explore the structure and meaning of communication at the individual and organization level. In the chapter, research methods are reviewed independently, and then presented together for consideration as a mixed approach. To demonstrate utility and challenge, a structural analysis of hyperlinks among college student group Web sites is paired with electronically conducted interviews. Howard's (2002) network ethnography is also discussed as a conceptual framework for viewing this project.

The objectives of this chapter are to define the concept of sense of virtual community (SOVC) that affects how individuals act and react within online groups. The chapter also examines what the potential antecedents and outcomes of SOVC are. To achieve these objectives, the author first examines how the SOVC construct has developed and our current knowledge of it. The author then discusses current issues and controversies surrounding SOVC and presents a program of research that could help researchers develop their understanding of SOVC.

Ramirez et al. explore the growing problem among adolescents in school of cyber-bullying. The chapter first documents the problem from a communication-based perspective, and offers a foundation for its study. The chapter discusses bullying in a traditional sense, and then contextualizes it within a computer mediated communication setting. The chapter also discusses existing research on cyber-bullies and victims of cyber-bullying.

This chapter explores the process and problems of publishing the Internet E-Zine. The conventions of this relatively new electronic magazine are noted. How the E-Zine should work in tandem with the website is explored. The chapter concludes with tips for avoiding spam filters.

This chapter examines the use of computer-mediated communications for maintenance of long-distance interpersonal relationships and for exchange of social support when individuals have limited availability for personal face-to-face contact. The author summarizes recent research on the use of CMCs by people in transitions, such as international students moving across cultures. Then, specific features of CMCs that make them favorable over other communication mediums are discussed.

This chapter presents a model (WebCom) for understanding and analyzing website mediated communication. The model combines three theoretical approaches—communication, medium, and activity theory—into one generic model for understanding complex website communication situations in their entirety. An analysis of YouTube is carried out in order to demonstrate how WebCom is used and how cultural and contextual aspects should be taken into account in designing website and computer mediated communication.

This chapter reviewed contemporary research on virtual collaboration. Two types of virtual collaboration were examined. First, the authors review new findings on research in immersive virtual conferencing and recent findings on social interaction in non-immersive virtual conferencing. The chapter then concludes with speculation about the future trends in virtual collaboration.

This chapter discusses the emergence of peer-to-peer (P2P) systems as a medium for computer mediated communication and how these systems have evolved to tackle new challenges. This is done in the context of a case-study of Gnutella, one of today's most significant peer-to-peer file sharing systems. The chapter concludes with a discussion of potential future trends for P2P based computer mediated communication.

This chapter reviews research on the social psychology of asynchronous many-to-many interactive data systems. Various aspects of knowledge communication are discusses, with the ways in which they influence people's behavior. The chapter focuses on psychological, rather than technological, factors of computer mediated communication. Highlights of the practical significance of this type of communication are in one sections, and the chapter concludes with some thoughts on ongoing trends.

Terms such as computer mediated versus face-to-face interaction, virtual versus real, and flaming have lead to theoretical misunderstanding about online and offline communication. This article discusses problems that standard terms introduce. The goal is to show how concepts and their orienting frameworks complicate scholars ability to observe and analyze certain data. The chapter concludes by proposing specific approaches for examining this situation.

Analytical frameworks for examining educational computer mediated discourse have been mainly designed for asynchronous discussions; hence the classification schemes are typically more sensitive when applied to longer postings than the shorter, more condensed exchanges present in online synchronous discourse. This chapter introduces the Exchange Structure Analysis framework for examining online synchronous interaction at levels of structural organization and pragmatic intention. The further applica-

tion of social network analysis as a method and visualization tool for the coded exchanges are explained and illustrated. Examples are provided from transcript data of moderated collaborative group discussions during virtual tutorials in a case study. With the integration of discourse and social network analytical methods, a richer interpretation is gained on the processes of articulation and negotiation of meaning during online learning conversations.

Chapter XXXV

Bradley M. Okdie, The University of Alabama, USA
Rosanna E Guadagno, The University of Alabama, USA

This chapter examines how computer mediated communication affects the social influence process. The authors also discuss current research on how individual differences and communication mode differences impact the persuasion process. The chapter concludes with a discussion on future areas of study and the implications of that research.

Chapter XXXVI

Michaël Opgenhaffen, Lessius University College, Belgium

In this chapter, the author makes a strong plead for not studying the internet as one, homogeneous medium, but instead as a meta-medium that carries various divergent news media with specific formal and structural features. The author uses both results from a content analysis and theories of the black box of information-processing of online news to urge scholars to invest in studies towards the form and structure of online news media in order to better understand the total process of computer mediated news communication.

Volume II

Chapter XXXVII

Barrie Jo Price, The University of Alabama, USA

Price puts forward that a confluence of societal change and new technologies changed the nature of the workplace. Examining how computer mediated communication has enabled people to overcome time and space barriers, she points out the difference between going to work and doing work. The chapter examines themes in the context of computer mediated communication, such as peer review, engaged learning, consensus building, and self-reflection. The chapter examines how these four areas, essential to workplace productivity, can effectively be brought about in a computer mediated forum.

Chapter XXXVIII

The chapter discusses how web sites can be designed to be effective computer mediated communication tools that provide equal access to the communication to users with disabilities. The chapter discusses accessibility guidelines including Section 508 of the American Rehabilitation Act, and the W3C Web Accessibility Initiative, focusing on the United States. The chapter discusses the problems faces by computer users with disabilities, including blind, poorly sighted users, color blind users, deaf users, epileptic users, and other disabilities or barriers, and how design can be accessible for communicating web information to everyone.

Chapter XXXIX

This chapter reviews a decade of literature published in the Journal of Computer-Mediated Communication, the seminal journal on the topic. Switzer examines this body of research by examining topics, methodologies and population represented in almost 300 articles. The chapter summarizes the ways in which research in computer mediated communication has evolved in a single decade, illustrating how the field is evolving and growing. The chapter therefore presents a theoretical framework for further research on the nature of research in computer mediated communication.

Chapter XL

Thorpe examines how group facilitators use story to build relationships among online group of people. The chapter discusses findings from a study investigating the use of story using a variety of computer mediated communication tools. The study included tools such as e-mail, audio, web conferencing, instant messaging, chat, blogging, and online surveys. Implications of online communication, such as disembodiment, unclear membership, and the level of tolerance for technical difficulties, are discusses, as well as interventions.

Chapter XLI

The communicative norms shared by online communities like newsgroups and mailing lists are examined in this chapter. The chapter investigates various roles that metacommunication plays in online communities, and how community building works in the virtual world. Metacommunication, as discussed in this chapter, is divided into instruction and evaluation. The chapter looks at community norms as expressed in messages in several mailing lists, as well as reactions to users to break the norms.

Woletz discusses digital story telling from both an anthropological and historical point of view. The chapter discusses media formats, technological artifacts used, presentational strategies, pragmatic factors, and communicative modes of digital storytelling. The chapter also discusses contacts of storytelling practices. The chapter traces the history of digital stroytelling from the 1970s to today's use of YouTube. Finally, Woletz describes two approaches to storytelling; top down, which emphasizes highly technical laboratories; and bottom up, which is derived from publishing stories using technology such as YouTube.

This chapter explores how psychotherapy and psychosocial interventions, which rely on verbal communication and language, can use computer mediated communication. The chapter discusses both advantages and limitations of using CMC in these fields. Several forms of CMC are discusses, including email, chat, and short message service (SMS). The chapter suggests three CMC approaches for relapse preventions following inpatient treatment, and concludes that evidence supporting technology-bases interventions in health care is growing and likely to become widespread.

The chapter places electronic discussion group leadership and moderation, and discuss the distinctions among group administration, monitoring and reviewing. Just as the online discussion group is a voluntary, informal learning group in the historic tradition, so the monitor or reviewer of the online discussion group fulfills many of the roles, tasks, and responsibilities of an informal adult educator in their roles as discussion leaders and facilitators. This positions the moderators of online discussion groups within the realm of interest to adult education and educators. By examining such factors, this chapter will provide the foundations for understanding the complex, dynamic, and multitextural environment in which online discussion group moderators function.

This chapter identifies ten characteristics of online focus group text chat, including writing conventions. The chapter gives an overview of stance shift analysis, a type of quantitative content analysis, which is used to minimize investigator bias in investigating how people signal attitudes and opinions in online focus group interactions.

A series of experiments investigated creativity and quality of work-product solutions in virtual teams (Ocker,2007, 2005; Ocker & Fjermestad, 1998; Ocker, Hiltz, & Johnson, 1998; Ocker, Hiltz, Turoff, & Fjermestad, 1996). Across experiments, small teams with about five graduate students interacted for approximately two weeks to determine the high-level requirements and design for a computerized post office (Goel, 1989; Olson, Olson, Storrosten, & Carter, 1993). The means of interaction was manipulated in these experiments such that teams interacted via one of the following treatments: (1) asynchronous computer medicated communication (CMC), (2) synchronous CMC, (3) asynchronous CMC interspersed with face-to-face (FtF) meetings, or (4) a series of traditional FtF meetings without any electronic communication.

This chapter integrates existing literature and developments on electronic mentoring to build a constructive view of this modality of mentoring as a qualitatively different concept from its traditional face-to-face version. The concept of e-mentoring is introduced by looking first into the evasive notion of mentoring. Next, some salient e-mentoring experiences are identified. The chapter goes on to note the differences between electronic and face-to-face mentoring, and how the relationship between mentor and mentee is modified by technology in unique and definitive ways. Readers are also presented with a collection of best practices on design, implementation, and evaluation of e-mentoring programs. Finally, some practice and research trends are proposed. In conclusion, the author draws an elemental distinction between both modalities of mentoring, which defines e-mentoring as more than the defective alternative to face-to-face contact.

Section IV
Tools and Technologies Related to CMC

Podcasts like many other new Internet genres, are thought to be listened to mainly by an affluent, geographically spread out audience who create podcast themselves. By looking at the various institutional and production issues, along with audiences of the podcast medium, this chapter will show how this genre works to create and sustain mass communities of "prosumers" and mobile audiences. Also, this chapter will historically contextualize the podcast by showing ways in which it is not simply a reiteration of earlier technologies, but also a distinct new medium with a unique, prosumer-friendly mode of transmission and reception.

Online, email-based discussion groups are contemporary examples of an historical tradition of voluntary, informal, learning groups used by adults for topical discussion, fellowship, and learning. Because the discussion among group members takes the form of email exchanges, they are also been likened to historical correspondence networks. This chapter sets the historical context of the email-based discussion groups that preceded the extensive use of bulletin-board style discussion forums in contemporary learning management systems.

This chapter highlights various ways that the academic library community is incorporating CMC techologies. This chapter focuses on instant messaging, blog, wiki, and podcast technologies. The authors provide current examples of academic libraries implementing these technologies. Advantages and disadvantages as well as barriers to implementation of these technologies are discussed. This chapter concludes with an exploration of future trends of CMC technologies used in academic libraries.

This chapter discusses how virtual teams can utilize blogs for their computer mediated communication tool to coordinate their work and effectively communicate. The chapter includes recommended practices for virtual teams to adopt, suggestions for communication techniques, and challenges this practice might create. The chapter gives examples of virtual teams, like political campaigns, already using blogs to communicate, and demonstrates how the "blogosphere" is a social network with individual blogs functioning as "nodes." The chapter posits that blogs have a unique nature and characteristics, such as convenience, pervasiveness, and media richness, that can enhance virtual team collaboration.

This chapter will explain corporate blogs, its benefits and risks. It will explore with examples why blogs are important to organizations in terms of knowledge management, team management, marketing, collaboration and building customer relationship. Also it will give suggestions as to how information spe-

cialists or librarians in the corporate sector can assist in setting up blogs and in training the employees to learn the new communication technology.

Chapter LIII
Suely Fragoso, Unisinos, Brazil

This chapter proposes that search engines apply a verticalizing pressure on the WWW many-to-many information distribution model. In so doing, this pressure forces us to revert to a distributive model similar to that of the mass media. Within this paradigm, the confidence users place in the search engines and the ongoing acquisition of collaborative systems and smaller players by the large search engines contribute for the verticalizing pressure that the search engines apply to the WWW. In discussing these matters, the author also presents a brief history of search mechanisms for the Internet and discusses the increasing ties between the search engines and the advertising market.

Chapter LIV
Sandra Harrison, Coventry University, UK

This chapter investigates turn taking in naturally occurring email discussions. In email discussions, participants can self select to contribute at any time, turns cannot be interrupted, and adjacency cannot be guaranteed. However, participants engage in recognisable discussions and "speaker" change occurs. Patterns of turn taking can be observed, and there are many parallels with spoken conversation. Based on these observations, 'rules' for turn-taking in email discussions are devised.

Chapter LV
Robert Karl Koslowsky, Independent Scholar, USA

This chapter addresses the introduction of a multiservice provisioning platform (MSPP) into the transmission segment of the communication network. MSPPs enabled the proliferation of computer mediated communication (CMC) through the synthesis of traditional voice and emerging Internet traffic. The bandwidth bottleneck created by voice-only-based equipment was broken by the MSPPs and positioned the Internet for carriage of even higher bandwidth video traffic.

Chapter LVI
Eric T. Meyer, University of Oxford, UK

This chapter presents a typology for approaching the study of photography as a form of computer mediated communication, and then presents several examples illustrating the consequences digital photography has for amateurs and professionals. Examples include photojournalism, scientific photography, photography in the legal system, and personal photography. The chapter ends with a call for additional research into the social aspects of this ubiquitous form of computer mediated communication.

This chapter discusses synchronous, one-on-one, computer mediated communication and its implications on communication, especially for people with speaking or hearing difficulties. The chapter reviews the growth of this type of communication, beginning with TeleTypewriter/ Telecommunications Devices for the Deaf (TTY/TTD), and details how instant messenger communication has developed some of the same features as the TTY/TTD communication has used for years, such as shorthand to increase the speed. This aspect of the communication is then discussed in depth, including who uses it, advantages and disadvantages of it, and whether there will be an influx of the IM jargon into everyday language.

The history and use of podcasting and really simple syndication (RSS) is covered in this article, including an in depth explanation of each technology and how they can be used together. The chapter details how podcasting can be a useful tool in educational and business settings, and provides a practical summary of the tools needed for implementing the technology. Both hardware and software are covered, as well as the applications for podcasting, and some issues and attitudes toward it. Broad implications are also discusses, such as how copyright relates to the technology, whether auditory instructional technology differs from in-class instruction, and how the use of podcasting transforms a social understanding of authority.

This chapter examines a form of CMC called computer synthesized speech (CSS). In this chapter, the authors review the development of CSS technology and discuss the work on perception and comprehension of CSS. The authors then examine how CSS use influences interactions between people, in particular, disabled people. The chapter concludes by emphasizing that the development of CSS systems should take into account various social psychological factors rooted in prejudice and stigma of the disabled.

Pankl and Ryan discuss the effect that Web 2.0 technologies are having on academic libraries. The authors posit that Web 2.0 is bringing about significant pedagogical transformations in university curriculums by bringing a need into the curriculum for stronger information literacy instruction. The chapter discusses

the pedagogical practice on university campuses within the past thirty years toward a theory of social construction of knowledge, and go on to discuss the trend of Information Commons within academic libraries and how this fits in with the broader theme of this communicative learning. They conclude that the understanding of communication and pedagogy on college campuses has transformed and that the libraries offer the channels to best accommodate this transformation.

Chapter LXI

Jutta Weber, Technical University Carolo-Wilhelmina of Brunswick, Germany

This chapter discusses epistemological, ontological and techno-material aspects of socio-emotional robots, particularly personal service robotics. The chapter focuses on social robots that interact physically, affectively and socially with humans, to support them in everyday life, play with or entertain them, and educate them. The aesthetics of social robots is discusses in terms of importance, explaining the differences between anthropomorphic robots, zoomorphic, and cartoon-like robots, and how the human reacts differently to the robot based on its looks. For example, users interacting with robots with humanoid features have a higher expectation of intelligence than from robots with animal like features. The chapter discusses the in broad terms the development of human robot interaction and summarizes several approaches to designing robot behavior to best communication with humans.

Chapter LXII

Kalev Leetaru, University of Illinois, USA

This chapter explores the recent rise of instant messaging systems as a centerpiece of online communication and the role this new medium will play in the communicative sphere. As the medium has evolved, it has grown to subsume many traditional communication technologies, merging their individual capabilities. A cross-section of popular and established technologies is examined and a strata of affordances introduced, describing the media's capacity for tasks enabled through their message transport. Through this framework the modern medium of Instant Messaging is compared against these other technologies in terms of the affordances offered by each and the argument presented that IM is evolving to subsume many of the traditional communicative mediums into a single communications hub, or hypermedium.

Section V
Cultural and Linguistic Issues in CMC

Chapter LXIII

Edgar Gomez Cruz, Universitat Oberta de Catalunya, Spain

This chapter examines the state of CMC research in both Latin America and Spain. This examination begins with a general introduction to the CMC studies that have been conducted in Latin America and Spain. The chapter then compares CMC studies in Latin America and Spain with the CMC research done in Western Europe and the United States. The chapter then concludes with an in-depth look at three

countries in which research into CMC appears to be the most developed or focused: Mexico, Argentina and Brazil.

      Susan R. Fussell, Carnegie Mellon University, USA
      Qiping Zhang, Long Island University, USA
      Leslie D. Setlock, Carnegie Mellon University, USA

This chapter discusses how cultural differences influence computer mediated communication. The authors present a theoretical framework for understanding relationships between culture and computer mediated communication. They then use this framework to organize a detailed review of prior research on culture and computer-mediated communication. Throughout their review, the authors highlight the types of cultural differences that have been shown to make a difference and the aspects of computer-mediated communication they affect. The chapter concludes by suggesting some new avenues of exploration in the area of culture and computer-mediated communication.

      Wengao Gong, National University of Singapore, Singapore
      Vincent B. Y. Ooi, National University of Singapore, Singapore

This chapter examines the defining linguistic innovations in online chat and the social motivations behind them. In the chapter, the authors explore the uniqueness of online chat as a means of communication for (1) offering people opportunities to make new friends or acquaintances, (2) psychologically experimenting with different identities, and iii) exploring new relationships without the shyness that face-to-face interaction can bring. The authors also describe in detail some of the innovative linguistic features observable in this unique mode of communication and explain the social functions of these features. The chapter concludes with further trends concerning online chat as a means of communication and some recommendations for further research.

      Jung-ran Park, Drexel University, USA

This chapter presents a discourse analysis based on the linguistic politeness theoretical framework, applied to real time online chat. The chapter discusses differences between face to face communication and online chat, such as contextual cues, the effort and time required for keyboarding, and paralinguistic features of verbal communication. The chapter then presents online mechanisms by which users overcome the constraints of online chat. Park uses discourse analysis to analyze chat transcripts that took place in a mathematics group collaborating on a problem, and analyzes the way in which online language users enhance social interaction and group collaboration through this CMC channel, concluding that participants are able to employ a variety of tactics to signal non-verbal communication cues that normally take place in a face to face setting.

Focusing on synchronous computer mediated communication platforms, this chapter discusses a variety of chat platforms including instant messengers, web chat rooms, e-conferencing platforms, and other chat software. The chapter examines the impact that these technologies have on language teaching and learning, and addresses how the technology and diversity affect language teaching and learning processes, and make online activities motivating and authentic. Several pedagogical uses of synchronous computer mediated communication are presented, along with recommended guidelines for success. The chapter concludes that computer mediated communication technologies can bridge the gap between educators who are used to a print paradigm and students, who are often times digital natives.

Taiwo examines linguistic forms and functions of text messages in Nigeria, examining how mobile phones have affected communication in Nigeria. The political and economic conditions in Nigeria are briefly described in the context of the availability of telecommunications. Sociolinguistics and languages in Nigeria are also discussed in the same context. The chapter examines various orthographic forms and linguistic devices common in text messaging, including contractions, initialisms, and acronyms, and examines how Nigerians employ them in English as well as how they relate to the indigenous languages of Nigeria.

This chapter introduces the embodied metaphor as a means of studying the multifaceted relationship between computer mediated communication (CMC) and culture. It argues that the embodied metaphor offers a more reliable framework, as opposed to both deterministic and dispositional perspectives, in that it provides a way to understand, explain, and frame the user's adaptive response to CMC. Furthermore, it also argues that culture has the potential to shape interactions by influencing the way metaphors are enacted. The author hopes that the aforementioned approach will provide a new understanding of the interplay between CMC and culture, informing future study design and bridging the existing gap between qualitative and quantitative research through action science.