

Preface

With the virtualization of data, communication, and services, cloud computing is opening up many newer horizons in the field of education by offering more efficient technological features and pedagogical affordances. Having emerging interactive features such as creating, saving, sharing, and syncing data and communication in the cloud from anywhere, any device, anybody, and any time bases, cloud-based pedagogies have potential to offer new teaching and learning opportunities. Consequently, there is a growing trend of exploring and using cloud computing in K-12 classrooms and in higher education settings. Cloud technologies such as Google Drive, Dropbox, iCloud, Web 2.0, social media, and other cloud-embedded technologies are rapidly permeating the digitally and/or cloud-based networked classrooms and learning communities. Cloud-based pedagogies are capable of generating new possibilities for improving and transforming existing pedagogical practices and learner engagement. Theoretically, conceptually, and pedagogically, we envision using cloud computing and/or cloud technologies as learning tools, spaces, or systems that can be utilized at the individual, classroom, and institutional levels. Our principal collective research and scholarship interest in this book is to investigate what and how cloud technologies can be used for learning engagement at different levels and diverse contexts. But we also observe that there is a serious lack of theory, research, methodology, and practice on how cloud pedagogies can be conceived, designed, and implemented in the context of emerging digitally networked classrooms and learning communities.

There are several critical elements that remain unexplored within the emerging cloud pedagogies. First, despite the rapid permeation and widespread use of cloud technologies in classrooms (and other learning contexts, e.g., workplaces and networked communities), the theoretical, conceptual, and practical notion of “cloud” still remains cloudy to many educators, researchers, learners, administrators, and policymakers. Second, cloud pedagogies thrive in collaboration and collective intelligence harnessed within the local and global (glocal) learning contexts. This requires cross-cultural, multi-centric, transnational, and global engagement that not only romanticize the presence of the crowd (student population from different continents of the world), but also validate the presence and participation of the “crowd” representing the diverse local and global learners. Finally, cloud pedagogies play important roles to enhance learners’ technological knowledge and skills that are highly relevant for preparing themselves as global citizens, professionals, and entrepreneurs in the digitally networked worlds. Thus, this proposed book project will be a timely call to explore the potentials of cloud pedagogies to align with the twenty-first century learners’ needs and expectations and to foster meaningful learning engagement.

In this book, our major objective are to critically explore and examine the features and affordances of cloud technologies for pedagogical purposes focusing on the improvement and transformation of existing pedagogical practices (e.g., teaching, learning, training, and collaborative knowledge engagement

Preface

in general); to capture the uses and impacts of cloud computing in teaching, learning, curriculum, and engendering newer types of student engagement opportunities; to offer new pedagogical strategies for engaging students and/or networked community learners in collaborative knowledge building processes by harnessing collective intelligence in relation to locally and globally networked learning communities. Additionally, our principal objectives are also to investigate and timely address the issues and challenges of integrating cloud technologies for socioeconomically, culturally, and linguistically diverse learners; and to offer conceptual, theoretical, and empirical research insights into using cloud technologies in the context of currently evolving digitally equipped and networked twenty-first century classrooms and learning communities.

Our intended audiences, in this book, include scholars, researchers, college instructors, teachers and teacher educators, professional/business trainers, community members, activists, educational software designers, and undergraduate and graduate students from multiple disciplines such as education, rhetoric and composition, communication, and educationally oriented business education. More specifically, this book will be crucial for those who envision and/or practice of integrating emerging technologies (e.g., cloud technologies, social media, and Web 2.0) in designing curricula, developing learning and training models, and delivering teaching and learning with technology in general.

This book is organized into three major sections. Section 1 highlights the concepts, theories, and practices of cloud technologies and/or cloud- and crowd-based pedagogy. This section primarily deals with conceptual, theoretical, and/or historical aspects of cloud technologies and cloud and crowd pedagogies within the 21st century networked pedagogical landscapes. The chapters in Section 1 discuss what cloud computing is in relation to conceptual, theoretical, and pedagogical contexts, including introductions to the cloud, its history, foundational knowledge about cloud technologies and pedagogies, emerging features, and potentials of the cloud. This section further stresses on what types of cloud literacies are important in cloud pedagogical contexts in a broader horizon (pedagogy inside and outside the classroom practices), why they are important, and how we harness them and/or the cloud affordances for pedagogical purposes. In this section, we also cover epistemological, ontological, and axiological conceptualization of cloud pedagogies such as critical analysis within socio-economic, cultural, political, and psychological terrains on how instructors adopt and/or reject the idea of integrating cloud technologies into pedagogies.

Similarly, Section 2 stresses the dynamics and dimensions of cloud technologies and cloud- and crowd pedagogies. This section mainly explores and examines the dynamics and dimensions of cloud pedagogies including technological, pedagogical, and socio-cultural and linguistic aspects. The chapters of this section mainly cover technological dynamics and dimensions of cloud technologies and cloud pedagogies such as what cloud computing/technology is; how emerging features of cloud computing can be utilized for creating, saving, sharing, and syncing data and communication in the cloud from anywhere, any device, anybody, and any time bases. The chapters, in this section, interpret pedagogical implications for deriving new cloud and crowd-based teaching and learning opportunities based on these cloud features. This section also deals with pedagogical dynamics and dimensions of cloud pedagogy such as what new types of pedagogies can be designed, developed, and delivered by using cloud technologies. In short, the main purpose of this section is to critically discuss what cloud tools and features are; how cloud affordances exist and also could facilitate teaching, learning, curriculum, learning engagement, and learning assessment and evaluation, etc. What cross-sectional potentials can be re-imagined between cloud technologies and pedagogies for devising new and/or improved types of teaching strategies, methods, models, student engagement techniques, and digital learning spaces among others. The chapters also address sociocultural dynamics and dimensions of cloud technology

and pedagogy such as how cloud pedagogies intersect with socio-economic, multilingual, translingual, transnational, and multicultural issues/contexts, and how cloud pedagogies address socioculturally and linguistically diverse learners and collaborators in classrooms and learning communities.

Section 3 focuses on research and practice of cloud technologies and pedagogies. We designed and included research-based reports and cases of using cloud technologies in classrooms and learning communities. Section 3 mainly focuses on how specific types of cloud tools, features, and affordances are used for such as creating and sharing; building learning repository and interactivity; facilitating learning processes (e.g., writing, peer review/critique, group project, etc.) and activities; creating remixes, mash-ups, and digital cross-breeding. It also poses questions such as: what new types of cloud learning analytics are emerging that can be used to assess and evaluate student engagement, learning goals, outcomes, assessments, and evaluations?

SECTION 1

Marohang Limbu, in his chapter “Cloud and crowd networked pedagogy: Integrating cloud technologies in networked classrooms and local and global learning communities,” argues that our knowledge is constantly shifting from analog literacies to digital literacies, industrial literacies to information societies, paper literacies to screen literacies, and mono-modal literacies to multimodal literacies for which digital technology and/or digital culture has become a dynamic and evolving force. Limbu contends that we are invariably encountering digital technologies’ shifts and are explicitly or implicitly embracing such knowledge shift nearly everywhere in the world without any exception, including areas such as business, science, education, and engineering. This knowledge shift demonstrates that digital literacy has become an inescapable component in our daily life in the context of the 21st century’s digitally networked communities. In his chapter, Limbu discusses the affordances of cloud technologies and cloud and crowd pedagogies such as what is digital teaching, learning, and writing in the crowd context, how digital pedagogy currently became an inescapable element, and why instructors from any global communities (should) welcome this epistemic shift in the learning and writing processes. Limbu’s chapter stresses on how instructors can engage students in the cloud environment, how students can share a complex set of linguistic and cultural narratives, and how students can collaborate and cooperate to create their realities in the context of the 21st century’s networked classrooms.

Limbu’s chapter succinctly aims to discuss cloud technologies, cloud-based networked spaces, and cloud learning spaces and to critically explore and examine the features and affordances of cloud technologies for pedagogical purposes focusing on the improvement and transformation of existing pedagogical practices (e.g., teaching, learning, training, and collaborative knowledge engagement in general). Limbu’s chapter captures the uses and impacts of cloud computing in teaching, learning, and engendering new types of student engagement opportunities; it also demonstrates how newer cloud and crowd based pedagogical strategies function within networked community members and beyond in relation to collaborative knowledge building processes, and it exhibits how cloud and crowd based pedagogy harnesses collective intelligence within networked learning communities and beyond. Additionally, Limbu discusses how cloud-and crowd-based pedagogy promotes cross-cultural, inter-cultural, and inter-epistemic communication/knowledge from the local to global level. In brief, Limbu stresses epistemological, ontological, and axiological conceptualization of cloud pedagogies including critical analysis within socio-economic, cultural, political, and psychological terrains.

Preface

Dilli Edingo's "Cloud-Enabled Learning Environment: Optimizing Inclusive Learning Environments and Collaborative Pedagogies and Bridging the Digital Divide" focuses on the emergence and/or advent of cloud computing and how it has changed the ways of thinking, communicating, performing professions, and maintaining socio-cultural and community relations. Edingo argues that capacious cloud storage and its rapidly growing facilities and capabilities in virtualizing human activities and the entire phenomenal entities and in synchronizing them with new digital cloud technologies such as laptops, tablets, smart-phones or mobile phones, and personal computers (PCs) have not only increased human capabilities, but also added new creative dimensions to sociocultural, economic, political, epistemological, ontological, and educational fields. And these capacities are profoundly changing the ways of producing, sharing, and acquiring knowledge, teaching, and learning contents. Edingo's chapter critically examines how cloud computing optimizes learning opportunities and transforms teaching and learning pedagogies, and also defines what a cloud-enabled learning environment means.

Edingo's chapter also critically explores how cloud-enabled learning environments and cloud-based pedagogies can address the gaps in education (caused by the digital divide), how cloud-assisted networks of local learning-hubs can contribute to the success of global literacy campaigns, and how cloud computing reaffirms the significance of distance learning or massive open online course (MOOC) and cloud-assisted practices of teaching self. Finally, he states that the rapid shifts in pedagogical grounds from non-virtual paradigms into the virtual world or the cloud clearly indicate that in the future teaching and learning activities and pedagogies become more cloudocratic.

In the chapter "Teaching and Learning in the Cloud: 'Anywhere, Anytime.' Anybody, Too?" Anita August argues that knowledge is no longer produced exclusively in the traditional class-based learning environment because for twenty-first century learners, digitally networked classrooms are the new social spaces where innovative learning perspectives are cultivated. August further stresses that like traditional class-based learning environments, digitally networked classrooms need to be sensitive to the social forces of race, gender, and class that will inescapably invade digital communication and/or global cultures. August contends that even in the cloud, difference as a concept is always already embedded as a contributing element under which knowledge is constructed, disseminated, and maintained. She suggests that a consideration of "difference" and its signifying effect on cloud pedagogy is a useful lens to explore the phrase "anywhere anytime" to the term "anybody" in the digitally networked classroom. Finally, August proposes that the model "anywhere, anytime, anybody" must become part of the basic structure of a democratic and collaborative knowledge building community to democratize teaching and learning in the cloud.

Jason Tham, in his chapter "Genres in the MOOCology of Writing: Understanding Cloud-Based Learning through a Genre-Activity Analysis", contends that with constant emergence of cloud services and platforms for learning at a global scale, the field of education is in the midst of exploring and adapting to new pedagogical features afforded by these environments. Tham further explores that among the most debated cloud and crowd pedagogical environment is the development of MOOCs--short for massive open online courses, which poses questions to the traditional brick-and-mortar teaching model and implore new ways for instruction and learning. Based on Tham's research and writing on MOOCs, he critically argues that although some studies have looked at the effectiveness of MOOCs as a mode of delivery, there still lacks a genre approach to analyzing MOOCs as socio-rhetorical systems that have complex relationships with other social entities in the larger ecology of learning. With an eye toward how writing is taught and learned in the MOOC context, Jason Tham investigates the kinds of course genre invented or reimagined by the cloud technologies and pedagogies afforded by MOOCs, and how those

affordances facilitate writing instruction. In this chapter, Tham uses “Activity Theory” to highlight the genre activities specific to two composition MOOCs. By situating these MOOCs as activity systems, he offers an informed observation on the genre components affecting how students learn about writing in MOOC settings. These insights lead to numerous pedagogical implications, including the need to treat MOOCs as an emerging learning ecology that is different from conventional models.

SECTION 2

Binod Gurung, in his chapter “3Ds of Integrating Cloud Technologies into Classrooms: Digital Identity, Competencies, and Self-Efficacy”, investigates that cloud technologies offer many pedagogical possibilities for collaborative learning, ubiquitous learning, and documenting learning engagement through learning analytics among others. Gurung further contends that effective integration of cloud technologies demands a complex set of teachers’ theoretical and conceptual understandings and digital competencies. Furthermore, the teachers also need to overcome their critical internal barriers such as the lack of digital self-efficacy. A closer look reveals that there is a undergirding notion of teachers’ digital identity that enables the teachers’ theoretical and conceptual understandings and digital competencies self-efficacy. Gurung critically explores and examines newer pedagogical possibilities of integrating cloud technologies into classrooms within the triadic interplay of digital identity, competencies, and self-efficacy (3Ds).

In his chapter entitled “Critical Cloud Pedagogies: Using Network Diagrams to Name and Visualize Learning Networks,” Jack Hennes demonstrates that while many students will soon enter high-tech workplace environments that utilize cloud technologies and systems, they must be critical of the technologies and infrastructures they use on the cloud. Hennes further explores that more pedagogical approaches are needed to facilitate learning environments where students both use cloud technologies and have opportunities to critically reflect on their rhetoricity. Hennes argues that new vocabularies are needed to describe the use of cloud technologies, especially those used in our pedagogical practices. Utilizing vocabularies and methods informed by actor network theory, instructors can easily identify and diagram the networks that students compose in pursuit of their learning goals. To demonstrate, Hennes offers network diagrams representing two different writing courses taught in the United States, in turn presenting how instructors can engage in similar diagramming practices and even use the “cloud” and “networks” as crucial points of inquiry for students.

Brown and Hocutt, in their chapter “Pervasive Pedagogy: Collaborative Cloud-Based Composing Using Google Drive”, contend that using personal cloud-based storage has become a way of life for many. Whether it’s Dropbox or Google Drive, Microsoft OneDrive or Apple iCloud, free and low-cost personal cloud storage is readily and inexpensively available, enabling users to access their files and content from any networked device. With a networked device, internet connection, and an account, files can be saved and backed up online, shared, and downloaded on demand. This new way of accessing, managing, and sharing information is transforming the tech industry, the workplace, and our personal relationship to technology. Increasingly, cloud-computing plays a role in education, as students use applications located in the cloud, and store and share a variety of media with classmates and faculty. Institutions -- including colleges and universities -- that implement storage and sharing using cloud technology must consider the way that it transforms access, communication, interaction, and relationships between and among the institution and its constituents.

Preface

By drawing on Selfe and Hilligos' (1994) theoretical foundation, "Technology changes us, redirects our thinking about the primary tasks of teaching reading and writing" (p. 1), Ramesh Pokharel, in "New Media and Technology: How Do They Change the Notions of the Rhetorical Situations?" contends that new media and technology have an overall impact in our lives including the way we write and read a text, and teach writing. Pokharel argues that by altering our overall literacy practice, new media and technology always creates a new situation, and require the users to use it to explain what cloud technology is. In this chapter, Pokharel creates a narrative that tells stories how new media and technology has created a new situation to redefine, reexamine, remap, or revive the existing notions of the digital rhetorical situation. Pokharel's chapter addresses two major parts: definition of new media and technology and the impact of new media and technology in changing the notions of the rhetorical situation. While in the first part, he delineates the definitions of new media primarily in terms of technology, and discuss overall impact of new media and technology in human life physically and psychologically, in the second part, he discusses how new media and technology has changed the notions of the rhetorical situation.

Jailei Jiang, in "Translingual and Digital Ecologies: A Cloud Pedagogy for Second Language Classrooms", argues that scholarship in cloud pedagogy has provided intriguing lenses through which researchers enhance pedagogical approaches for digital composition classrooms. However, Jiang contends that there is a lack of discussion on how cloud pedagogy could be employed to benefit second language learners of writing. Scholars in both digital and translingual areas of research have touched on conceptualizing their theories through multimodal, collaborative, and ecological perspectives of writing. Based on this conceptual foundation, Jiang looks into the theories and practices of translingualism and explores how translingual writing can be merged and integrated into the multimodal applications of cloud-based learning. Following and expanding the practices of digital composition, chapter aims to argue for an ontological shift to a translingual view of cloud-based writing and examine how it informs second language learning.

Dhruba Neupane, in his "The Digital Third World, Digital Democracy, Cloud Pedagogy: Learning from Multilingual Bloggers," discusses what cloud computing and cloud technology has generated teachers' and scholars' attention as a viable alternative to traditional education. The discourse and rhetoric around cloud—computing, education, pedagogy— seems to romanticize the potential of cloud technology, ignoring, consequently, questions about language, power, and ideology. Neupane, in this chapter, attempts to reintroduce that question and discusses what blog pedagogy offers to multilingual writers and/or how blog pedagogy provides teaching materials free. Similarly, Neupane, in his chapter, demonstrates how language, translation, and transitional exchanges get mediated. Neupane also demonstrate the connection between the digital Third World and issues of equality and access, and how they constitute part of the discussion around cloud pedagogy and practices as a democratic space.

SECTION 3

Katherine Emmons, in her "Doctoral Learning and Cognitive Apprenticeship: Technology Tools for Emerging Scholars," discusses how cloud technologies provide tools to help build the mentoring relationships that are needed for doctoral students to become scholars in their own right. Simmons, in this chapter, draws on observed examples and experiences to discuss a model of cognitive apprenticeship as first described by Collins, Brown, and Newman (1986) and Collins, Brown, and Holum (1991). Emmons argues that this model is helpful for understanding the required relationships and commitments in online

doctoral learning, especially between mentors and doctoral students. By referring Kumar, Johnson, and Hardemon (2013), Emmons states when these relationships are formed early in the process of dissertation research, progress in the degree program can be encouraged, and is more likely to culminate in timely completion. Based on her a long term online teaching experience, she contends that technology can foster relationships, particularly for doctoral students who study at a distance, including those enrolled in online programs. In this chapter, Emmons shares her own experiences of using technology in online programs spanning over 15 years, as well as the entry of helpful cloud tools for conferencing, folder and file sharing, scheduling, and community building. In nutshell, she claims that this model is helpful for understanding the required relationships and commitments in online doctoral learning, especially between mentors and doctoral students.

Julia Parra in her “Phases, Scaffolds, and Technology: Cloud-Based Student Collaboration Model for Online and Blended Course Design” argues that with ubiquitous Internet and the related tools, including computational devices and cloud-based technology, has come public access to a world of information literally at one’s fingertips. This has to the increased use of use cloud-based student collaboration as a key strategy for engaging students as responsible, creative, and productive participants in the learning process. For the purpose of this qualitative study there are three objectives, 1) update and revise a course design model for cloud-based student collaboration that uses phases and scaffolds, and includes an optimal cloud-based collaboration toolkit identified by graduate students, 2) describe an online course wherein this model has been applied, and 3) share exemplar course materials including guides, learning plans and directions, and content scaffolds in the form of templates, that support this model and can be repurposed by anyone using cloud-based student collaboration in higher education.

Yowei Kang’s “Using the Hybrid Interactive Rhetorical Engagement (H.I.R.E.) Metrics to Analyze the Effectiveness of E-Learning Websites” contends that the rapid development of Web-based learning technologies has become a global phenomenon that affects higher education institutions. Kang further argues that both developing and developed countries are eager to take advantage of the multi-modal and asynchronous technical capacities that Web 2.0 can provide to college students. The “E-learning Phenomenon” has also prompted the development of different types of learning tools, ranging from commercially-developed Blackboard, open-source learning platform Moodle, or less popular platform developed by individual universities around the world. This study applied a theoretical concept, Hybrid Interactive Rhetorical Engagement (H.I.R.E.), and a series of quantitative metrics derived from H.I.R.E., to assess the Digital Learning Website developed at Kainan University, Taiwan. Exploratory empirical findings help college instructors to understand whether H.I.R.E. serves a good system design concept explain and predict users’ learning behaviors and can be used to assess a variety of web-learning technologies in the market.

Bjyanjana Sharma, in her “Digital literacy: Dilemma for EAL Parents” by bringing the context of the practice of digital literacy in western classrooms, she argues that her chapter shares the views of six English as an additional language (EAL) parents, who just arrived to Australia, and the EAL parents came to Australia from India, Indonesia, Nepal and the Philippines. In this chapter, Sharma shares her studies on five Australian primary government school teachers on digital literacy. The data used here are drawn from a PhD study which explores parents’ and teachers’ perspectives on the literacy learning of EAL children at a primary school in Victoria. Qualitative data include a questionnaire, focus group interviews, individual interviews, classroom observation and emails. Sharma, in this chapter, shares her research findings that indicate that the teachers are positive towards digital literacy whereas the parents

Preface

express mixed views, and she affirms that most of the negative comments from the parents have come from their misunderstanding about how digital literacy is included in the school curriculum.

Kate Fedewa and Kathryn Houghton in their “Scaffolding Agency and Responsibility in Cloud-Based Collaborative Writing” argue that although most students regularly interact online for social reasons, many are uncomfortable collaborating for academic work, even work utilizing familiar cloud technology. Because, based on their research believe that, collaborative writing in digital spaces is becoming commonplace in work and academic environments, composition teachers must help students to recognize their individual agency within group work and to develop strategies for a shared writing process. How can we scaffold online writing experiences so that our students’ ability to collaborate emerges as a strategic and still-developing part of the learning process? In this chapter, Fedewa and Houghton discuss strategies for scaffolding a collaborative writing process using Google Docs in the composition classroom. They describe four sample activities appropriate for undergraduate writing courses: anonymous invention, group annotated bibliographies, group agendas and project plans, and peer review. Fedewa and Houghton suggest best practices for developing individual agency and shared responsibility for group writing in the cloud.

Jaya Kannan and Pilar Munday, in their “Challenges in Using Cloud Technology for Promoting Learner Autonomy in a Spanish Language Course: Reshaping Pedagogical Design” state that in a digitally networked classroom, the learner connects with peers, instructors, and open resources, be they human experts or online resources in non-linear combinations. As a result, the learner must navigate a complex web of associations and pathways. Thus the teacher practitioner who uses the networked medium as the platform for facilitating language learning has the challenge of developing methodologies, task-based activities, and a selection of tools to frame a learning ground that will provide maximum opportunity for the student to strengthen learning. Kannan and Munday, in this chapter, present a case study of a teacher practitioner’s pedagogical design process in an online undergraduate course, “Advanced Grammar and Culture through Social Media.” The main focus of this case study is a professional development exercise in which the teacher practitioner went through one cycle of planning, piloting, reflecting on results, and identifying key challenges.

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