

2014-01-01

# Inviting Citizen Designers to Design Learning Management System (LMS) Interfaces For Student Agency In A Cross-Cultural Digital Contact Zone

Rajendra Kumar Panthee

University of Texas at El Paso, pantheerk@gmail.com

Follow this and additional works at: [https://digitalcommons.utep.edu/open\\_etd](https://digitalcommons.utep.edu/open_etd)



Part of the [Curriculum and Instruction Commons](#), [Educational Methods Commons](#), [Rhetoric Commons](#), and the [Social and Cultural Anthropology Commons](#)

---

## Recommended Citation

Panthee, Rajendra Kumar, "Inviting Citizen Designers to Design Learning Management System (LMS) Interfaces For Student Agency In A Cross-Cultural Digital Contact Zone" (2014). *Open Access Theses & Dissertations*. 1320.  
[https://digitalcommons.utep.edu/open\\_etd/1320](https://digitalcommons.utep.edu/open_etd/1320)

This is brought to you for free and open access by DigitalCommons@UTEP. It has been accepted for inclusion in Open Access Theses & Dissertations by an authorized administrator of DigitalCommons@UTEP. For more information, please contact [lweber@utep.edu](mailto:lweber@utep.edu).

INVITING CITIZEN DESIGNERS TO DESIGN LEARNING MANAGEMENT  
SYSTEM (LMS) INTERFACES FOR STUDENT AGENCY IN A CROSS-  
CULTURAL DIGITAL CONTACT ZONE

RAJENDRA KUMAR PANTHEE

Department of English

APPROVED:

---

Beth Brunk-Chavez, Ph.D., Chair

---

Maggy Smith, Ph.D.

---

Arvind Singhal, Ph.D.

---

Charles Ambler, Ph.D.  
Dean of the Graduate School

Copyright ©

by

Rajendra K. Panthee

2014

INVITING CITIZEN DESIGNERS TO DESIGN LEARNING MANAGEMENT  
SYSTEM (LMS) INTERFACES FOR STUDENT AGENCY IN A CROSS-  
CULTURAL DIGITAL CONTACT ZONE

by

RAJENDRA KUMAR PANTHEE, MPhil

DISSERTATION

Presented to the Faculty of the Graduate School of

The University of Texas at El Paso

in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PHILOSOPHY

Department of English

THE UNIVERSITY OF TEXAS AT EL PASO

December 2014

## **Acknowledgements**

I would like to thank Dr. Beth Brunk-Chavez for her guidance, support and encouragement throughout my dissertation project. She always encouraged me to go ahead with my research project. Dr. Brunk-Chavez's constructive comments/feedback on my drafts helped me to bring my study in this form.

I like to thank Dr. Maggy Smith, second reader of my dissertation committee. Her comments/feedback on my research and her constant encouragement helped me complete this study. I am also thankful to Dr. Arvind Singhal, the outsider reader of my dissertation committee. His approaches to teaching and research encouraged me to carry out this project.

I am indebted to the faculty of the Rhetoric and Writing Studies program at UTEP, especially Dr. Kate Mangelsdorf, Dr. Evelyn Posey, Dr. Carlos Salinas and Dr. Isabel Baca for their invaluable support. I would like to acknowledge Dr. Lucia Dura, Dr. Theresa Donovan, Dr. Terry Quezada, Dr. Marohang Limbu, and Dr. Gustav Vershunko for their indirect or direct support in my dissertation. I am equally thankful to Ceci Rhyes and all the English Department Office members at UTEP.

I am equally thankful to Prof. Dr. Clay Spinuzzi from University of Texas at Austin for his guidance in the process of writing dissertation. Similarly, I am thankful to Prof. Dr. Catherine Schryer from Ryerson University for her guidance during my dissertation writing time in Canada.

I am also indebted to Owen Williamson for his comments/feedback on my research. His critical perspective toward technology always inspired me to carry out my project. Thank you Owen for managing your time and patience to edit my dissertation draft.

I like to thank Smriti Rajkarnikar and Sonish Shrestha for their invaluable help in formatting and organizing tables and figures in my dissertation.

Thank you Mom for your encouragement and inspiration. You have always been a great source of inspiration in my life. Thank you Shreeya and Sarthak for being wonderful kids. Your love helped me

to find some time to play with you despite my hectic schedule as a graduate student and an assistant instructor. You always encouraged me to go ahead!

Finally, I owe to my wife more than I can put in words. She sacrificed her own study to bear with me as a graduate student's spouse. She looked after all of our needs in our family. I dedicate my Dissertation and my doctoral degree to her. Thank you Sharmila!

## **Abstract**

Inviting Citizen Designers to Design Learning Management System (LMS) Interfaces for Student Agency in a Digital Cross-Cultural Contact Zone assesses how FYC students from periphery cultural and linguistic backgrounds perceive Blackboard Learn and other learning management system (LMS) interfaces. The report of an empirical study shows that the current LMS design does not provide writing students in general and writing students from periphery cultural and linguistic backgrounds in particular an opportunity of a higher-level interactivity with the LMS. The current design neither includes periphery students' cultural and linguistic norms and values, nor does it allow them to affect the existing design through their design activities. These LMSs are currently constraining users from higher-level interactions. As a result, writing students have to act as the LMS ask them to do, and they remain passive in these platforms. Based on the web usability test responses, this study proposes to invite Citizen Designers, writing students from periphery cultural and linguistic backgrounds, to design LMS interfaces to enhance user activities and transform them into cross-cultural platforms. This study analyzes interface designs by Citizen Designers to see how designers acquire their agency in a cross-cultural digital contact zone. This study concludes that Citizen Designers' participation in interface design helps them create favorable electronic environments that help them acquire their agency and enhance their (digital) writings and researches.

## Table of Contents

Acknowledgements.....	iv
Abstract .....	v
Table of Contents.....	vi
List of Tables .....	ix
List of Figures.....	x
 Chapter 1: Current Interface Design Approach: An Introduction.....	 1
1.1 Composition Classrooms in U.S. Universities.....	1
1.2 Collaborative learning in the cross-cultural contact zone situation.....	6
1.3 LMS interface re/design and its importance.....	9
1.4 Current Learning Management System (LMS) Interface Design.....	12
1.5 Interface design for student agency in a cross-cultural digital contact zone.....	20
1.6 Project overview.....	23
1.7 Chapter summary.....	26
 Chapter 2: Technological Culture.....	 29
2.1 Relationship between technology and culture: An introduction .....	29
2.2 Technology as a culture and techno-cultural hegemony.....	37
2.3 Political economy approach to technology culture.....	48
2.4 Cultural studies .....	51
 Chapter 3: Interface Design and Its Contribution.....	 60
3.1 Interface and its different dynamics.....	60
3.2 Interface as a basic interaction .....	61
3.3 Interface as a cultural and linguistic contact zone and border.....	63



3.4 Interface as an electronic environment .....	65
3.5 Rhetorical function of interface.....	69
3.6 Interface design and its contribution to peripheral writing students.....	74
3.7 Interface design and problem solving.....	79
 Chapter 4: Theoretical Modalities.....	 81
4.1 Usability test .....	81
4.2 Activity theory.....	82
4.3 Articulation theory.....	90
4.4 Genre theory.....	98
4.4 Theories of affordances .....	101
 Chapter 5: Usability Test of LMS and other Platforms.....	 111
5.1 Empirical study: An introduction.....	111
5.2 Questions for an empirical study.....	112
5.3 Empirical study of Blackboard and other platforms such.....	113
5.4 Empirical study procedure.....	113
5.5 Citizen Designer perceptions of current LMS interface design.....	119
5.6 LMS design for a cross-cultural digital contact zone.....	130
5.7 LMS interface design for study agency.....	144
5.8 Implications of Citizen Designer Responses.....	150
 Chapter 6: Analysis of Citizen Designer Web Interface Designs.....	 154
6.1 Interface design and designer agency: An overview.....	154
6.2 Web interface designs and their analysis.....	155

6.3 Maintaining cultural and linguistic backgrounds through design activities.....	156
6.4 Interface designs and their different relationships.....	160
6.5 Culturally localized design activities.....	163
6.6 Designer/user agency through concrete design activities.....	166
6.7 Establishing cultural and linguistic identity through techno-culture consumption.....	171
6.8 Designer/user agency through technological affordance and mediation process.....	173
 Chapter 7: Interface Design and Electronic Environments.....	 175
7.1 Summary of discussion.....	175
7.2 Citizen Designer agency through LMS interface design.....	177
7.3 Student agency and writing in the electronic environments.....	178
7.4 Future directions.....	181
7.5 LMS interface re/design and the conceptual relevance outside of the discipline.....	183
 References.....	 186
Vita.....	207

## **List of Tables**

Table 5.1: Citizen Designers, Semesters, and Their Use of Technologies .....	114-115
Table 5.2: Citizen Designers and Their Ethnic Backgrounds .....	117
Table 5.3: Citizen Designers and Writing Courses .....	117
Table 5.4: Citizen Designers' Ethnic Backgrounds and First Language .....	117
Table 5.5: Current Blackboard Interface Design and User Inclusion .....	119
Table 5.6: Interface User Experience and Expertise Assumption.....	123
Table 5.7: Language and Graphic Contribution to Online Environments.....	127
Table 5.8: Transforming Blackboard Interface into Cross-Cultural Platform.....	131
Table 5.9: Factors that Contribute to Cross-Cultural Platform.....	133
Table 5.10: Factors that Contribute to Use Activity on Blackboard Interface.....	137
Table 5.11: Providing Blackboard Users with Customizing Opportunities.....	141
Table 5.12: Cross-Cultural LMS Interface Design and Its Contribution to Users.....	145
Table 5.13: Citizen Designer Agency Through LMS Interface Design.....	147-148

## **List of Figures**

Figure 4.1 Example of Activity Theory. ....	87
Figure 6.1: Screenshot of User Interactivity .....	157
Figure 6.2: Screenshot of Cross-Lingual Website.....	159
Figure 6.3: Screenshot of Citizen Designer Webpage.....	161
Figure 6.4: Screenshot of Designers and Different Relationships .....	162
Figure 6.5: Screenshot of Members in a Discourse Community .....	164
Figure 6.6: Screenshot of a Blog.....	167
Figure 6.7: Screenshot of Personalized Website .....	169
Figure 6.8: Screenshot of Use Inclusive Webpage.....	171

# **Chapter 1: Current Interface Design Approach and Student Agency in a Cross-Cultural Digital Contact Zone**

## **1.1 COMPOSITION CLASSES IN U.S. UNIVERSITIES: AN INTRODUCTION**

Composition classes in U. S. universities are composed of students from both central and peripheral cultural and linguistic backgrounds. The center/periphery dichotomy among composition students is powerful as it incorporates a number of cultural and linguistic differences between them. Canagarajah (1999) defines the “center” as “traditionally ‘native English’ communities of North America, Britain, Australia, and New Zealand” and the “periphery,” as “communities where English is of post-colonial currency, such as Barbados, India, Malaysia, and Nigeria” (p. 4). While Canagarajah’s center/periphery dichotomy is most immediately related to linguistic differences in the postcolonial situation, it is also applicable to the study of dominant and marginal cultures given that language cannot be separated from culture. In other words, there exists the possibility of a center/periphery dichotomy even within people in a single multi-lingual or multi-cultural society. Due to linguistic and cultural differences within the US and outside, composition classes in US universities are an excellent example of contact zones because the cultures, languages, and literacies composition students bring with them are not treated equally. Generally speaking, the culture of native English speakers is considered to be center or dominant in US universities and First-Year Composition, or FYC, courses, in terms of the design of composition curriculum and syllabi, the implementation of pedagogies, and the selection of digital technologies. From this perspective, cultures that belong to non-English speakers are regarded as subordinate/marginal/peripheral cultures, or are even treated as deviated forms of the dominant culture. Writing students from peripheral cultural and linguistic backgrounds feel further alienated in the cross-cultural digital contact zone when they find that they are not included in the design of those online platforms

such as Blackboard Learning Systems. Writing students from peripheral cultural and linguistic backgrounds, whom I call Citizen Designers hereafter, have no agency in the design of these LMSs such as Blackboard Learn. Therefore, I propose to invite Citizen Designers to design LMS interfaces in order to transform them into cross-cultural digital platforms. Citizen Designers' participation in the LMS interface design helps them acquire their agency in the contact zone, and this interface design knowledge/skill for the cross-cultural contact zone enhances their digital writing and research skills, since the rhetorical strategies involved in LMS interface design are directly related to their digital writing and research.

### **1.1.1 Writing classrooms as cross-cultural contact zones**

*The contact zone* is a complex concept that refers to a situation in which multiple discourse communities with asymmetrical power relations exist in a dynamic relationship with one another (Pratt, 1991; Yee, 2002). Pratt (1991) uses this anthropological term to describe the social situation in a colonial or post-colonial period as “social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power, such as colonialism, slavery, or their aftermaths as they are lived out in many parts of the world today” (p. 34). A contact zone situation is very complicated in Pratt's view because it produces “misconception, incomprehension, dead letters, unread masterpieces, absolute heterogeneity of meaning” (p. 37). A contact zone situation creates abundant possibilities for misunderstanding and multiplicity of perspectives among people. On the other hand, Wolff (2002) defines contact zones as imaginary spaces where there is a meeting of different cultures that very often have “different languages and certainly different values, and [where] very often one culture will dominate the other as it privileges itself” (p. 241). Hence, contact zone stands for a cross-cultural

conflict whether in a colonial and postcolonial spaces or in imaginary spaces as the powerful culture privileges itself by dominating.

Bizzell (2002) applies Pratt's (1991) notion of contact zone rather uncritically when she takes the United States itself as a perfect example of contact zone because of its history of massive immigration to the US from many parts of the world beginning with the seventeenth century up to the present day and applies her the US as a contact zone to Rhetoric and Writing Studies (RWS) at large. She argues that English studies ought to undergo a radical reorganization based on the reality of the contact zone because multiculturalism in English studies "is a name for our recognition of this condition of living on contested cultural ground, and our desire to represent something of this complexity in our study of literature and literacy" (Bizzell, 2002, p. 52). She contends that contact zone produces productive dialogue in the field of English studies. Unlike Pratt (1991), who sets the idea of contact zone in opposition to utopian ideas of community, Bizzell (2002) treats contact zones as "alternative utopias where difference, not homogeneity, and discord, not agreement, are idealized" (Hall and Rosner, 2004, p. 103). Pratt (1991) herself warns against the uncritical use of the notion because no one is excluded but no one is safe in the contact zone. Hence, Bizzell (2002) uses contact zone interchangeably with multiculturalism even if contact zone stands for cross-cultural conflicts rather than coming together of many cultures.

The notion of contact zone should not be limited to a mere state of multiculturalism. The contact zone concept can be productive and useful if the inevitable tension involved is addressed in a constructive way when cross-cultural tensions come in situation of "conversation" instead of "conquest" Wolff (2002, p. 241). Wolff (2002) studies her own classroom from the contact zone perspective and challenges Pratt's notion of the safe house in a contact zone. Pratt (1991) argues

that “[w]here there are legacies of subordination, groups need places for healing and mutual recognition, safe houses in which to construct shared understandings, knowledges, claims on the world they can then bring into the contact zone” (p. 40). For Pratt (1991), this is created mutually by developing high degrees of trust, shared understandings, and temporary protection from legacies of oppression. She argues that a safe house will help all participants grow in the contact zone situation.

The notion of the safe house is not so easy to practice as a pedagogical tool, and it is necessary to challenge and extend the notion of “safe house” to the productive use of tension in the contact zone. Miller (2002) both challenges and extends Pratt’s (1991) notion of a safe house in contact zone. Like other scholars, he relies on Pratt’s definition and finds Pratt’s image a promising way to imagine the classroom, however, he finds limitations in everyday classroom practices. After critically analyzing Pratt’s claims in the classroom situation, Miller finds that a teacher’s traditional claim to teacher authority is undermined and reconfigured as well as real work of learning through negotiation and dialogue begins in contact zone. An appropriate way to deal with this situation for a teacher who believes in education as a force for positive social change is neither to exile nor to give free reign to students with different voices. Unlike Bizzell (2002) and others who may have overemphasized the possibility of negotiation, Miller (2002) understands that the potential of a contact zone perspective rests upon “its ability to raise critical awareness about the consequences of contact” (p. 106). Miller points out the importance of a dialogue for a social change in a contact zone situation instead of embracing the notion of uncritical negotiation. Miller’s emphasis upon dialogue can be invaluable for developing current technology design in general and LMS interface design in particular for as cross-cultural



platforms since “universal” or “neutral” design approach may well alienate users from various cultural and linguistic peripheries.

The critical perspective of the cross-cultural contact zone helps one to recognize differences in a constructive way. Gottschalk (2002), therefore, argues that “heterogeneity is actually the norm” of the contact zone (p. 58). She argues that “recognizing heterogeneity can mean recognizing the diverse natures and needs of both students and instructors, rather than trying to homogenize their experiences, and, in turn, it can mean welcoming innovation and variation in our choices and plans for courses” (p. 58). Any attempt to forcefully homogenize heterogeneity is unwise if a contact zone involves a recognition of real differences. Any attempt of to bulldoze or carelessly homogenize irreducible differences necessarily alienates members who belong to marginal categories. It can even cause antagonistic struggle when those who are thus marginalized feel they are going unheard and being excluded. Therefore, Gottschalk (2002) argues that “it is assuredly wise to recognize and take advantage of clashes between differing cultures, values, and disciplines, rather than pretending that they do not exist” (p. 63). Similarly, in the process of LMS interface design for a cross-cultural digital contact zone situation, it is equally essential to include users from various cultural and linguistic backgrounds recognizing their cultural and linguistic norms and values. The decision to include users from various cultural and linguistic backgrounds can play a significant role in creating a conducive learning environment in a contact zone situation.

The notion of the contact zone is central to this study because different users from various cultural and linguistic backgrounds come together in LMSs such as Blackboard Learn and other platforms. Even if it is believed that these online platforms bring users from different cultural and linguistic backgrounds together on equal terms, this is not the case in reality

particularly in a cross-cultural contact zone. There is a possibility of a clash between users from different cultural and linguistic backgrounds and programmers over system design and expectations because of current design practices that seem to favor dominant cultural and linguistic norms and values. This is despite the fact that students with peripheral cultural and linguistic backgrounds also utilize these online learning environments. Here it is important to recognize the differences that users bring with them into these platforms. Such a conscious and practical recognition can play a tremendous role in creating a safe house in these learning environments. The concept of collaborative learning is useful in this respect, so, I will turn to the role of collaborative learning in a contact zone situation in the next section.

## **1.2 COLLABORATIVE LEARNING IN THE CROSS-CULTURAL CONTACT ZONE SITUATION**

Collaborative learning covers a range of techniques and practices such as peer critiques, small writing groups, and joint writing projects among many others. It refers to a method of making group members accountable for an act to be performed instead of making a group member accountable for the performance of that act. It offers “a style of leadership that actively involves the participants in their own learning” (Trimbur, 1985, p. 87). The collaborative classroom can be taken as a critique of the teacher-centered classroom in which authority is vested in a teacher who disseminates knowledge to students. The social interaction of the learners plays a great role in the collaborative classroom in which thinking collectively is taken as a great source of individual thinking and effective interaction.

Among many factors such as the presence of nontraditional students through open-admissions programs as well as the writing fellow and science mentor programs at Brown University, this movement began in the 1960s when students challenged the university’s authority and demanded a greater role in determining the scope and content of their education

(Stewart, 1988, pp. 59-60). Alternatively, Bruffee (1984) traces collaborative learning's origin to British secondary school teachers and a medical educator, Mason, who found her students improving their diagnostic skills by collaborating rather than trying to work individually (Stewart, 1988, p. 60). Bruffee (1984) argues that “ [t]he first steps to learning to think better, therefore, are learning to converse better and learning to establish and maintain the sorts of social context, the sorts of community life, that foster the sorts of conversation members of the community value” (pp. 639-640). Critical consciousness is invaluable for an effective and successful collaborative learning.

Collaborative learning is firmly bolstered by social constructionism, a belief in which knowledge is constructed instead of delivered by the participants in the society. Bruffee (1986) argues that social construction “assumes that the matrix of thought is not the individual self but some community of knowledgeable peers and the vernacular language of that community. That is, social construction understands knowledge and the authority of knowledge as community-generated, community-maintaining, symbolic artifacts” (p. 777). According to Kolko (2000), this notion of knowledge as a social construction “positions students, readers and writers in dialogue with world surrounding them,” and knowledge as a social construction “necessarily incorporates the goals of cultural studies” (p. 33). Hence, it holds that there are not certain truths and knowledge is a mutual construction through socially/communally created knowledge and action. This notion of social constructionism is very important in terms of technology design because it is “interpreted and reinterpreted depending upon the people involved, the context or situated in which it is designed, developed, or deployed, and the historical moment it resides within” (Johnson, 1998, p. 93). Social constructionism is useful for deconstructing cultural and technological hegemony through Citizen Designers' interface re/design activities. Therefore, the

notion of social constructionism promoted by cross-cultural collaboration can be immensely important to composition students in general and peripheral students in particular because it helps them deconstruct the cultural and linguistic hegemonies created by technology and develop critical perspective towards technology. Further, cross-cultural collaboration helps them to acquire their agency in a cross-cultural contact zone as well as practice social constructionism in their (digital) writing and research.

Collaborative learning is regarded to be one of the best means of knowledge production for a number of reasons such as its attempt to do away with “the sterile and nonproductive authoritarianism of the traditional classroom,” its effort in involving “students meaningfully and significantly in their learning,” its nourishing character due to which “students are nourished both socially and intellectually by the groups in which they work,” and its recognition “of the role social forces play in the very nature of language and learning” (Stewart, 1988, pp. 63-64). According to Lunsford and Ede (1983), collaborative learning demands more “flexibility and compromise” (p. 154) besides creating situations for achieving “better understanding,” generating “potentially richer and fresher ideas,” and developing “a stronger overall argument” (p. 155). However, the rigidity of current LMS design has not been fostering collaboration in general and cross-cultural collaboration in particular in a cross-cultural contact zone. Lunsford and Ede (2012) ask very pertinent questions with regard to collaboration in the cross-cultural digital contact zone:

Who will control the hardware and software through which writing flows? Who will have access to these technologies and to information and conversations of all kinds necessary to keep writing going strong? Where will the bottom line of responsibility fall for writing that is seemingly unauthored or unattributed ? (p. 3)

Design of hardware and software and user access to technologies play a great role for a meaningful collaboration in digital platforms. Even if composition students cannot provide input at the level of hardware design, acknowledging them as potential end users or participants in the software design encourages them to be good collaborators. Their active participation in terms of content and form can contribute to their visibility in the digital contact zone.

### **1.3 LMS INTERFACE RE/DESIGN AND ITS IMPORTANCE**

With the introduction of a variety of online learning formats (hybrid, technology-supported, and totally online classes) in the early 1990s, LMSs such as WebCT, Blackboard, Moodle, Sakai, and Desire2Learn have been assisting with delivery in this age of e-learning. Ros et al. (2013) categorize LMS tools into different generations in terms of four characteristics namely interoperability, communication, methodology, and learning experience. According to them, first generation systems were closed and proprietary. First general LMS tools provided a means of information push, however, they did not facilitate bilateral communication between instructor and student or between student and student. Second generation LMS tools such as Moodle, Sakai, and Blackboard facilitate collaboration between instructors and students and/or students and students. Despite these collaborative functions, users cannot “customize their own learning environments” in these platforms (Ros et al., 2013, p. 27). Third generation LMSs are proposed to be user-centered tools that facilitate active and social constructive learning. Because their services are yet to be concretized in LMS interface designs, it is difficult to say how these third generation LMS tools will include users from various cultural and linguistic backgrounds.

Because LMSs are not pedagogically neutral technologies, their designs determine whether they promote constructivist education to create space to all the members in a university

discourse community. According to Bennett (2011), Blackboard and Moodle are the most frequently used second-generation propriety and open source LMS, and Blackboard is an example of propriety LMS whereas Moodle is an example of open source (p. 4). Even if Blackboard and Moodle have similar features, there are differences in their approach to platform design. In contrast to Moodle, Blackboard positions itself as pedagogically neutral (see Adams, 2011). Most importantly, the focus of the interface reflects Moodle's constructive roots, and is focused on facilitating communications and social interaction (Pina, 2010, p. 4). Some users prefer Moodle over Blackboard because of its social constructive roots, and Moodle allows its users to set up a community hub.

Second generation LMS are characterized by a shift towards modular architecture designs, recognitions of the need for semantic exchange, integration of standards-compliant platforms and increased shift towards the 'service' principle, where aspects of functionality are extremely exposed (Dragger et al., 2007, pp. 28-29). Besides Moodle, most of the second generation LMSs remain content or teacher-centric, rather than learner-centric (see Yau et al. 2009). As a result, LMSs have not been fostering constructivist education that provides active and personal learning environment through student experiences and interactions within a learning environment (see Papastergiou 2006; see Ministry of Education, 2008). Similarly, the inherent structures of LMSs have been imposing a structural hierarchy that constrains users and tools from higher level of interactivity (Dorn 2006; Naveh et al., 2010, Carnegie 2009). Being mindful of these LMS limitations for constructive model of education, universities in Australia and New Zealand reviewed their LMSs use between 2005-2010 and used appropriate LMSs after 2010 to promote constructivist model of education in their universities. This evaluation of current LMS for the promotion of constructive model of education is directly related to my

advocacy for the LMS re/design by Citizen Designers in a cross-cultural contact zone situation of US universities.

Because I am focus on student agency and enhancement of student digital writing and research through LMS interface re/design, it is necessary to pay attention to how these LMS tools are designed. If their design is guided by social constructive model of education, they allow students in general and writing students in particular to share their personal experiences in these platforms through the higher-level of interactivity with these tools. This higher-level of interactivity helps writing students to acquire their agency through social constructive model of knowledge production and dissemination. In this context, these LMS promote active learning in which students learn by doing. Similarly, the appropriate re/design of these LMS facilitate digital writing and research in this age of new media. These LMS tools are representing digital spaces and it is necessary to research these sorts of spaces if we have to better understand how “different people write, communicate, and assert identity in virtual spaces that span cultures, geographic distance, and languages” (Sapinenza, 2007, p. 106). Similarly, these LMS platforms are right spaces for research since the “ability to produce, circulate, and use texts digitally has changed how writing is done” (Geisler & Slattery, 2007). An appropriate re/design of these LMS tools plays a significant role in order for students in general and writing students in particular to be able to produce, circulate and use texts digitally. Most importantly, writing students in general and Citizen Designers in particular need to understand different users have different cultural and linguistic norms and values as well as different user needs. Similarly, students need to understand that there are differences exist and that expressing values and viewpoints can alienate or include through the process of LMS re/design. It is necessary to place students in situations where they design documents and/or technological platforms for cross-cultural audiences.

Therefore, empirical investigations are essential in order to understand whether or not these LMS interfaces are appropriately designed to fulfill their goals for users from various cultural and linguistic backgrounds. This particular investigation can help us not only understand how cross-cultural “negotiations occur, but also how we can improve and subsequently implement those cross-cultural encounters into our classrooms to make the idea of designing for a diverse population very real” (Hilligoss & Williams, 2007, p. 246). These issues of creating democratic environments for diverse population in a cross-cultural contact zone can be invaluable for the enhancement of digital writing in this digital age when the writing is digitized in different contexts of our life. McKee & DeVoss (2007) argue that “[b]ecause of the increasing digitization of writing in educational, institutional, and social contexts, all composition researchers, not just computer and writing specialists, need to consider methodological and ethical approaches to digital writing research” (pp. 3-4). However, before considering these issues in digital writing and research, it is necessary to re/design LMS platforms rightly as the right approach in LMS design foster digital writings and researches whereas an inappropriate approach constraint them. Therefore, digital technologies in general and LMS tools in particular should be re/designed appropriately for appropriate users and use contexts. Involvement of users from various cultural and linguistic backgrounds can play a role in developing LMS platforms into democratic platforms that help writing students/users from various cultural and linguistic backgrounds acquire their agency and enhance their digital writing and research.

#### **1.4 CURRENT BLACKBOARD INTERFACE DESIGN**

The present interface designs of LMSs such as Blackboard do not afford writing students customizing opportunities. While the instructor may have several design choices available, most



LMS platforms, designed from the perspective of creating universal or neutral technologies for students, acknowledge the dominant cultural and linguistic perspectives while overlooking marginal cultural and linguistic perspectives. As a result, student agency and constructivism in writing and research are missing (Porter, and Sullivan, 2004; Selfe and Selfe, 1994; Johnson-Eilola, 2004; Wysocki, 2005). It is important to re/design LMS interfaces in order to promote active and personal learning environments through student experiences and interactions within a learning environment.

Blackboard has recently been upgraded from Blackboard 9.1 Service Pack 8 (SP8) to Blackboard 9.1 Service Pack 11 (SP11), and the software designers of the upgraded version claim that all Blackboard users have several options for customizing their user experience. According to Blackboard Faculty Support Handout (2013), Blackboard users are able to personalize themselves as learners. They have the option to create an identity called profile in ‘My Blackboard’, and it allows them to share academic information about themselves with other Algonquin Blackboard users, including those not in their Blackboard courses (p. 2). Blackboard also allows Blackboard users to personalize Blackboard by creating a profile page where they can write their name, upload their pictures and describe their area of study. They also have the option to determine how their course work is presented. For this, designers claim that the Post tool on Blackboard “consolidates posts from Discussion Boards, Wikis, Blogs, Journals and comments/replies to the posts, from all the courses a user is enrolled in. For Journals, Blogs and Wikis posts, users can comment right away from this interface. What [students] view can be customized using the existing filter options” (p. 3). These user tools and options definitely increase user activities on the Blackboard online platform, however, they are not enough to develop Blackboard online platforms into cross-cultural platforms as well as to provide writing

students with higher-level of interaction with Blackboard. The current Blackboard customization opportunity is of limited type, and writing students cannot affect the Blackboard design to transform it into democratic platform in terms of its design.

While the abovementioned user activities and customization opportunities on the Blackboard online platform are useful, they will not play a substantial role in creating inclusive online environments for learning. These user activities will not contribute much to the politics of interface (See Selfe and Selfe, 1994) and overall makeup of the digital environments that an interface stands for. Blackboard still tries to perpetuate the notion of neutral or universal technology. Its interface still uses English as a default language, for example. Besides performing the activities mentioned above, Blackboard users do not have the power to intervene through manipulating objects that another LMS tool Moodle offers to its users. It basically refers to user freedom in design that helps them change the design according to their need. Even if user-centered new media technologies provide users with the means to generate, seek, and share content selectively and to interact with other users in terms of using, playing, exploring, experimenting, discovering and sharing (Carnegie, 2009, p. 166), the current Blackboard design does not provide them with a high level of engagement or interactivity. As we have seen, Blackboard users are able to upload their pictures to the profile. They can also change interface colors, backgrounds images and patterns, layout grids and font on the group page; however, these are examples of low/limited interactivity still determined by the commercial or political interests of the corporation that created Blackboard. From this perspective, Blackboard is an example of low/limited interactivity because it limits users to certain predetermined activities. It does not provide users with higher levels of interactivity so that they can create and add content to the interface. These higher-level interactivity opportunities engage as well as empower users.

Further, as a cultural map, the Blackboard interface acknowledges only dominant cultural and linguistic norms and values. It helps to reproduce dominant cultural and linguistic norms and values, and, as a result, creates asymmetrical power relations between users from different cultural and linguistic backgrounds. Similarly, Blackboard as a linguistic contact zone reproduces the privileged position of Standard English. Blackboard has been a monolingual and mono-cultural border that acknowledges English as the default language. As a result, users from other cultural and linguistic backgrounds are obliged to forget their respective cultures and languages and adopt Blackboard's culture and language. Blackboard online environments may alienate peripheral writing students as these online environments are historically constructed and socially organized. It is not possible for peripheral writing students to acquire their agency in the Blackboard interface.

Interfaces as electronic environments facilitate interaction between users and system and encourage active integration and dynamic interaction. These environments are spaces where users' social, cultural, and linguistics norms and values come into play. From this perspective, interfaces represent larger dynamics of ideologies that reside unnoticed, and they carry material inscriptions of class and culture. (Grabill, 2003, p. 464) Interfaces should be understood as complexly interconnected artifacts that affect users in one way or the other (Spinuzzi, 2009). Since electronic environments represent the world outside, it is necessary to design them incorporating the user culture as a guiding force. It is equally important to provide users or participants with customizing opportunities so that the users will be able to incorporate their social, cultural and linguistic norms and values when they are able to affect the design. It will be invaluable to transform interfaces into rich social, cultural, and linguistic platforms through their

design. Customizing opportunity to users enhances user engagement and interactivity as well as empowers users from various cultural and linguistic backgrounds.

Unfortunately, current Blackboard design is content- and instructor- centered instead of learner-centered. It does allow course instructors to utilize customizing opportunities. However, customizing opportunities to instructors are limited to delivering course materials and holding discussions. As a result, course instructors are limited to the role of administrators instead of facilitator of productive collaboration. On the other hand, the abovementioned customizing opportunities to students cannot contribute to their active learning. These opportunities do not work toward the need of users from periphery cultural and linguistic backgrounds. Therefore, Blackboard software designers should invite users who have not been taken account of in its current design to develop it as a democratic platform since it is used by users from diverse social, cultural and linguistic backgrounds. User participation in the Blackboard interface design will work toward higher-level interaction with the Blackboard system since the current Blackboard interface design seriously lacks it. This higher-level interaction could make a difference to cross-cultural collaboration in the cross-cultural digital contact zone.

It is important to involve writing students in general and writing students from peripheral cultural and linguistic backgrounds in the re/design process to transform those online environments into cross-cultural platforms, and their participation in the design process can enhance their writings since design activities are related to writing (Johnson-Eilola, 2004; Selber, 2004). Interface re/design decisions by Citizen Designers will promote student agency when these online environments promote active learning in these LMS platforms. Student agency and active learning environments are great sources for knowledge production and its dissemination. Rhetoric and Writing Studies (RWS) in general and First-Year Composition (FYC) in particular

should provide these design opportunities to writing students so that writing students could exercise their critical and rhetorical power that RWS and FYC are trying to develop in writing students.

Historically, digital technologies used in the composition classroom in the cross- cultural contact zone are text-centric and treat learners as individual, isolated, creatively inventive, and technology users are seen as quasi-passive recipients of knowledge in this paradigm (Jonhson-Eilola, 2004, Berlin, 1982). The design of these digital technologies has undermined users/learners' own learning as well as users' contribution to peer learning. Even if Blackboard has tried to provide some customizing opportunities to its users, these opportunities are "not substantial" in the direction of democratizing Blackboard online environments. This particular design limitation works against "the interest of individuals whose cultures and communities have managed to maintain a value on multiple modalities of expression, multiple and hybrid ways of knowing, communicating and establishing identity" (Selfe, 2009, p. 618). Selfe (2009) argues that writing students "need a full quiver of semiotic modes from which to select, role models who can teach them to think critically about a range of communication tools, and multiple ways of reaching their audience" (p. 645). Similarly, a theory of semiosis will help writing students recognize the "'interested action' of socially located, culturally and historically formed individuals, as the remakers, the transformers, and the re-shapers of the representational resources available to them" (Kress, 1999, p. 84). This particular sense of remaking or re/designing helps the designers both reflect individual interest as well as socio-cultural trends since semiotic change is thus "shaped and guided by the characteristics of broad social factors, which are individually inflected and shaped " (Kress, 1999, p. 84). Semiotic systems that refer to different means of communications are regularized by different larger factors such as cultural

values, social contingencies, and innovations of individual signs and social interactions. These notions of the semiotic systems play a crucial role in the process of transforming current Blackboard into cross-cultural platform. Culture plays a great role in this process by affecting and even structuring social practices of communication. From the perspective of semiotic system, writers/designers are seen as the “remakers, transformers, of sets of representational resources- rather than as users of stable systems, in a situation where a multiplicity of representational modes are brought into textual compositions” (Kress, 1999, p. 87). From this perspective, student writers are designers besides written text producers. However, the present LMS design does not seem to be acknowledging their design potentiality.

Current Blackboard design is more oriented toward user function than user agency since there is nothing for the users or composers to see and question in terms of its visual design other than helping users functionally (Wysocki, 2004, p. 6). This means, Blackboard designers seem to be motivated by designing technology that is easy to use. However, this perspective of designing technology does not function properly for a cross-cultural contact zone where users from various cultural and linguistic backgrounds use the technology that is designed for universal users. According to Wysocki (2004), the design transparency is hidden in this particular simple and easy to use design approach. Therefore, Wysocki (2004) prefers the notion of learning (what is involved in design) over making things appear simple and easy to use, because this sense of easiness ignores the possibility of engagement between users and interface. She suggests that software design has been influenced by corporate capital and the defense industry, leading to a “logic of computer architecture” (p. 6) that has stifled the environment of student agency. Wysocki (2004) writes that “it is important to keep in mind ... that agency comes precisely in being alert to the “social forms” ... in which we move, in understanding where and how we and

our practices fit, and hence where and how we have room and opportunity to make change” (p. 13). In order to achieve these design goals, Wysocki refers to how an individual can stand out in a certain structure through his/her design activities. But in the case of Blackboard Learn the current design does not provide this opportunity to its individual users.

Because of the present design of LMS such as Blackboard Learn and other platforms used in composition classroom, writing students do not have a chance to thrive as successful digital writers and researchers since these platforms do not allow users to come up with their design preferences. (Foster, 2007; Berlin 1982). Therefore, their agency in the digital environment is disrupted and stifled (Sun, 2012) because of the privileging of text and rigidity. Looking at the issue of authorship from the postmodern perspective, Johnson-Eilola (2004) argues that “new ideas and texts do not spring from bits and pieces already out there” (p. 200). Even if Johnson-Eilola’s use of the term “intertextuality” privileges invention and agency in terms of written textual production, his overall critique is readily applicable to writing in the new media.

Popular approaches to interface are guided by a belief that it should be invisible, however, this particular approach is already questioned and regarded to be uncritical Selfe and Selfe (1994). Wysocki and Jasken (2004) argue that “interfaces are thoroughly rhetorical: Interfaces are about the relations we construct with each other- how we perceive and try to shape each other- through the artifacts we make for each other” (p. 33). Therefore, they argue that teachers of writing need to involve themselves and their students in the redesign of interfaces (p. 46). Similarly, Rosinski and Squire (2009) argue that interface design demands that writers/designers should consider both the rhetorical aspects of navigational system as well as technological choices that are rhetorical in nature (p. 158, 162). Therefore, they argue that

teachers of writing need to involve themselves and their students in the redesign of interfaces (p. 46). Wysocki and Jasken (2004) have pointed out the need to look at interface with a critical eye, and they have noted that “students are thus most often constructed by the handbooks as people who should care only about function and who compose for audiences who care only about ease” (p. 43). Their biggest concern is interfaces are not treated as rhetorical spaces. They ask teachers of writing to involve themselves as well as their students in the redesign of interfaces. Further, Wysocki and Jasken (2004) ask for reflexive interfaces, “interfaces that encourage their audiences to question how interfaces construct and shape those who engage with them” (p. 46). Even if reflexive interface seems to be aimed toward recognizing interfaces as rhetorical artifacts and critiquing them as main user goal, reflexive interface also provide invaluable insights on how interfaces should be re/designed for a particular context like cross-cultural contact zone. Hence, reflexive interface design approach can foster the notion of user-centeredness in a technology design, and writing students should be made aware of this user-centered approach in technology design. Involving writing students in LMS and other new media interface re/design helps them practice rhetorical nature of interface through their design activities. Finally, these notions of technology design in general and interface design in particular enhance student writings since design knowledge is directly related to student writings.

## **1.5 INTERFACE AND ITS DESIGN FOR STUDENT AGENCY IN A CROSS-CULTURAL CONTACT ZONE**

In this project, I focus on the interface re/design of online environments for a cross-cultural digital contact zone for a number of reasons. The first reason for giving so much importance to the interface itself is because literacy is assessed through the interface, “we should approach interfaces as sites as rhetorical practice- ones that open up new possibilities for making



meaning” (Kimme-Hea and Turnely, 2010, p. 33). The reason for focusing on digital environments is because they can play a crucial role in the democratization process of online platforms because they “ allow for postnational literacies and rhetorics, practices that transcend and yet are embedded in a specific geocultural location” (Pandey, 2007, p. 123). This idea of research in digital environment can be useful to explore cultural and linguistic issues in the digital environments. Further, writing in the digital environment demands writing students “a range of critical composing practices, and visual figuration and interactivity offer fruitful starting points for the development of critical, multimodel literacies” (Kimme-Hea and Turnley, 2010, p. 33).

The meaning and scope of interface range from place of interaction to developing hardware and software. For example, Carnegie (2009) defines interface as “a place of interaction whether the interactions are between user and computer, user and software, computer and software, user and content, software and content, user and culture, and the user and other users” (p. 165). Developing hardware does not fall under the premise of my discussion, whereas developing software does, but I should make it clear right away that I am not going to develop software. Since the existing low-level interaction is not sufficient enough to affect design by its users, I am going to suggest that software developers of those learning management systems develop software that fosters cross-cultural collaboration through high-level interaction since this high-level interaction can provide users with customization abilities and opportunities. Selber’s (2004) definition of the interface is useful for my project because he defines it as a “place where different agents and contexts are connected to each other: It is where the communicative process is centered, spreading out from that contact point between texts and users” (p. 141). With this type of interface, composition students and their contexts are made visible in the digital

environments. Further, Carpenter (2009) argues that it “represents the larger dynamics, ideologies, forces, etc. that reside, often unnoticed, behind the scenes while also functioning as the scene” (p. 142). His notion of visible interface is very important for my project because I am advocating for cross-cultural platforms. To a large extent, interfaces are “cultural maps” as well (Wood, 1992). According to Wood (1992), it is important to identify the cultural information passed along in the maps of computer interface-especially because this information “can serve to reproduce, on numerous discursive levels and through a complex set of conservative forces, the asymmetrical power relations that, in part, have shaped the educational system we labor within and that students are exposed to” (p. 21). Wood (1992) argues that [w]hat is mapped in computer interfaces- just as what is mapped in other social and cultural artifacts such as our educational system- is both ‘ownership’ and ‘opportunity’” (p. 21). Wood’s idea of computer interface is very useful for digital interface design by Citizen Designers in the digital contact zone.

My advocacy for the notion of cross-cultural interface design in order to acknowledge and honor those racial, cultural, linguistics and other power relations among composition students in the digital contact zone for a meaningful collaboration makes me believe in the rhetoricity of the interface. Since my study proposes the interface design by the Citizen Designer for the meaningful cross-cultural collaboration in the digital contact zone, I agree with Kimme-Hea and Turnley (2010) because they give emphasis upon the social change and empowering of the student agency through interface design. Kimme-Hea and Turnley (2010) argue that “interface designs influence user agency and thus raise key rhetorical concerns for new media composing” (p. 257). Their notion of interface design can be very useful to provide agency to the Citizen Designers in the digital contact zone. Further, my advocacy to re-design/re-imagine/re-create interface is to attempt to avoid disabling and devaluing composition students in general

and periphery students in particular. Therefore, I argue that it is necessary to rewrite social, cultural, and linguistic relationships through interface re/design by providing writing students in general and periphery writing students in particular a high level student interaction that engages as well as empowers students through their design activities.

## **1.6 PROJECT DESCRIPTION**

I will particularly focus on how Citizen Designers acquire their agency as well as how this interface design activity in the cross-cultural digital contact zone enhances their writing skills. For this, I will conduct a usability test of Blackboard Learn in order to understand how writing students in general and writing students from periphery cultural and linguistic backgrounds perceive LMS interfaces in a cross-cultural digital contact zone. I will ask them how they would re/design LMS interfaces for a cross-cultural contact zone, and I will also ask them how their interface design activities will help them acquire their agency in a contact zone. Further, I will analyze their interface designs in order to discuss how they acquire their agency through their interface designs. Of course, I will also be looking at how this creating and controlling of technologies according to a context will help them enhance their digital writing and research. My main focus will be on how this act of designing the digital interface helps designers acquire their agency in the cross-cultural digital contact zone and enhance their writing and research.

Writing students in general and digital interface designers in particular should know how the audiences become users since digital interfaces work as mediators between the information and the audiences or users in the Human Computer Interaction (HCI). They should also know that users interact and react with/to the interfaces they create. Therefore, interface design “requires writers to make technical choices that are also rhetorical in nature and to engage in

activities that parallel the design, implementation, and evaluation cycles typical in software development” (Rosinki and Squire, 2009, p. 162). This focus on recognizing the user helps to reduce cognitive load for the effective use of the interface.

Since interface design is concerned with usability testing in order to confirm whether users can operate the software, I first conduct a usability test of Blackboard Learn and other platforms such as Wikis and blogs in order to assess how Citizen Designers perceive different digital interfaces. The usability testing will be focused on what user activities writing students will need to opt for to affect the current Blackboard interface design. Cultural and linguistic perspectives in usability testing help me assess the user experience. It is immensely valuable to see how the cultural hegemony/ideology comes into play in technology design. Further, I do usability testing since “it applies to interface design and composition pedagogy” (Rosiniski and Squire, 2009, p. 160). I will see whether the user experiences any problem in the interface, whether it is a lower level or higher interaction to assess whether the current Blackboard Learn and/or other learning management system interface engage and empower writing students.

Next, I will use activity theory, articulation theory, genre theory and the notion of affordance in the analysis of student interface re/design. Activity theory is instrumental because of a number of reasons. First, it places actual practices on the center stage. Second, it treats action and meaning as inseparable entities. Third, it has robust framework for the study of contextual factors on an activity basis. Fourth, it makes us aware of complexities and fluidity of activities in context. However, activity theory has some limitations. For example, it is very individualistic, and it cannot analyze sign-mediated communication. Similarly, its contextual factors may not attend to subjectivity or broader sociocultural factors. To overcome these

limitations of activity theory, I will use cultural studies with a special focus on articulation since I focus on the cross-cultural technology design in the contact zone.

Articulation theory helps us to see the design practice as a process of articulation, disarticulation, and re-articulation. Since I am going to discuss the interface as a technological artifact I will treat those design features as assemblage of articulations between user goals and tasks, between technical functions and cultural meanings, between work efficiency and lifestyle choice, between design and production, between designer's culture and user's culture, and so on.

Since activity theory and articulations each have a different focus, I will bring genre theory to play a mediating role between them in the analysis of interface design by Citizen Designers. I will situate genre theory within the context of activity theory and articulation since it help me mediate their different focuses and create meaning out of those Citizen Designer interface design activities in a cross-cultural digital contact zone. This act of situating helps me understand genre as socio-rhetorical actions that operationalize everyday social processes and actions. There will be a reconceptualization of genre that calls for a reinterpretation of interface that extends beyond user-system interaction to include interactions between the user and multiple, sometimes competing, systems as well as between systems themselves. This will allow me to examine dynamic relations and negotiations mediated by genres in the interface designs.

Genres as behavioral and structural categories help me reconcile the difference between activity theory and articulation theory in mapping the context, since their focuses are different. For example, activity theory positions contextual factors squarely in a schematic triangle of activity; whereas articulation theory treats context as a movement and flow of relationship with hierarchical structure or center. Spinuzzi (2008) believes that genre as "stability-with-flexibility" could help "frame the stability/instability dialogue more productively" (p. 3). Genre as

stability/instability helps the design community to do away with the essentialist position brought by the cultural dimensions model in cross-cultural design. A genre lens also helps me focus on how cultural patterns represent particular communicative situations and activities for a given task as well as how they evolve as situations change.

Along with the use of activity, articulation and genre theories, I will bring the notion of affordance into my discussion. Affordance is a relationship between environment, organism and user activity for the creation of meaning in the interface. This notion of affordance helps me discuss the importance of designing technology according to users' social, cultural and linguistic backgrounds. I argue that the interface design should afford meaningful activities to users in the cross-cultural digital contact zone by providing clues to users in order to facilitate communication between the technology design and users for smooth and fluent interaction. This notion of technology design affording meaningful activities to users is invaluable especially for a cross-cultural digital contact zone because the lack of affordance makes the interaction between users and technology impossible. The notion of affordance plays a crucial role in establishing a relationship between users and technology in general and users and interface in particular.

After analyzing Citizen Designer interface designs, I will discuss how their interface designs skills and knowledge contributes to the creation of electronic environments because favorable electronic environments help Citizen Designers acquire their agency and enhance their writing skills. I will conclude my dissertation with a note on future directions of my research and its contribution to student writings and active learning.

## **1.7 CHAPTER OVERVIEW**

Chapter one introduces research project, research methodologies and chapter overviews. In the process of introducing the overall project, it introduces major concepts and discusses

briefly on cross-cultural contact zones, cross-cultural collaboration, and current technology design practices. It also defines interface and its re/design by Citizen Designers for their agency and enhancement of their writing in a cross-cultural digital contact zone.

Chapter two defines technological culture and discusses how technology and culture are not different entities with the introduction of articulation. Similarly, it discusses how media technologies in general and LMS in particular create and perpetuate techno cultural hegemonies. While discussing technological culture in detail, it defines culture from different perspectives as well as discusses the role of cultural studies in deconstructing techno cultural hegemonies.

Chapter three discusses interface from various perspectives in order to illustrate how interface re/design by Citizen Designers helps them acquire their agency in a cross-cultural digital contact zone. It also talks about the importance of interface re/design and its contribution to student writings.

Chapter four discusses major theoretical modalities namely activity, articulation and genre theories used in this research. It discusses how activity theory, articulation and genre theories as well as notions related to technological affordance help me analyze Citizen Designer interface design activities.

Chapter five answers my three major research questions through the usability test of LMS such as Blackboard and other platforms such as Wiki and blogs. It presents data as well as Citizen Designers views on how Citizen Designers perceive current Blackboard interface; how they would re/design Blackboard interfaces to transform Blackboard into a cross-cultural platform; and, how interface designers would acquire their agency in a cross-cultural digital contact zone through their interface design activities.

Chapter six analyzes Citizen Designer interface designs in order to discuss how their design activities help them maintain their cultural and linguistic norms and values through their interface design activities. It also talks about how they design interface contextually in order to include users from various cultural and linguistic backgrounds in a cross-cultural contact zone.

Finally, chapter seven talks about how LMS are transformed into cross-cultural platforms. It also relates interface to electronic environments, and it briefly discusses how this interface as electronic environment promotes active learning and concludes how this notion of interface as electronic environment enhances student writing.

Because this study foregrounds the role of culture in everything from designing writing curriculum and syllabi, acknowledging writing students' cultural and linguistic norms and values, and technology design, I am going to define and discuss culture from different perspectives in order to give a comprehensive overview of culture in the next chapter i.e., Chapter 2. In the process of defining culture from different perspectives, I will cover the issues related to cultural and technological hegemonies and the role of cultural studies to deconstruct these cultural and technological hegemonies.



## **Chapter 2: Technological Culture**

### **2.1 THE RELATIONSHIP BETWEEN TECHNOLOGY AND CULTURE: AN INTRODUCTION**

Because this study takes a cultural studies approach to analyzing technology design in general and Learning Management System (LMS) design in particular, it is necessary to understand the relationship between technology and culture. The relationship between technology and culture is often misunderstood because we tend to either over generalize or dichotomize technology and culture without contextualizing their relationships. We tend to sideline with either technological determinism or cultural determinism in our technology and culture discussion i.e., we either tend to talk about the impact of technology on culture or the impact of culture on technology. Technological determinism is “the idea that technologies drive cultural and social change” whereas cultural determinism is “the idea that technologies are solely the product of culture” i.e., technologies are neutral and serve our purpose since “culture necessarily shapes not only the possibilities for technologies but those technologies themselves” (Wise, 2006, p. 1). From the perspective of cultural determinism, culture is a context in which a particular technology is inserted.

Misconceptions about the relationship between technology and culture can result from our perspective of culture and technology. We think that technology and culture are two discrete entities, and we tend to over philosophize culture as an abstract entity whereas we tend to over-generalize technology as a thing or machine. While treating technology as a mere thing or machine, we tend to ignore the notion that technology is an artifact i.e., it is human made in which the maker’s social, cultural and linguistic norms and values are embedded automatically. Therefore, culture and technology should be defined as a whole, not separate from each other. When culture is treated as an ordinary way of life and tradition, technology becomes an

inevitable part of our everyday life automatically. Culture as a tradition plays a great role in making human activities and behaviors meaningful in our everyday life. Therefore, Wise (2006) argues

If we consider this idea that culture is a way of life, then, we have to acknowledge that technology is always already a part of everyday life: it's there in the cars we drive, the pens we write with, the oven in which we cook our food. Technology is not something separable from everyday life and it is not separable from culture. (p. 2)

Slack and Wise (2005) also treat them as a single entity i.e. 'technological culture' (p. 1). Therefore, it is necessary to go beyond the deterministic view of culture and technology to understand the meaning of technological culture as the deterministic view artificially separates technology and culture. As a result, technology is treated as a mere object or machine, and the meaning of technology is created through the object or machine itself ignoring technology's relation to other entities in our everyday life.

Understanding the effect of a given technology is very important in order to understand that technology as an assemblage. Slack and Wise (2005) propose the notion of causality for the understanding of technological effect. There are simple and symptomatic causalities:

Simple causality assumes that *effects are inherent* in the technology and that *precise effects are inevitable*. Symptomatic causality assumes that *broad parameters of effects are inherent* in the technology, that *a range of effects is inevitable*, and that various social forces are responsible for steering or choosing from among those effects. (Slack & Wise, 2005, p. 105 emphasis in the original)

These views assume technology as a mere thing or machine, and, hence, these views are examples of soft deterministic views of technology. So, Slack and Wise (2005) offer the notion

of nonmechanistic perspectives of causality and make several assumptions with regard to technology and culture. According to them, technology is connected to the context in which it is developed and used whereas culture stands for connections. From their nonmechanistic perspective, both technology and culture are understood as “structure(s) of connections” (p. 109). As a result, according to Slack and Wise (2005), technologies arise “within these connections as part of them and as effective within them” (p. 110). These nonmechanistic views on technology assume two different causalities namely expressive and articulation and assemblage. Expressive causality assumes that one force works as the center stage and unifies others to a homogeneous whole whereas articulation causality assumes that no force or relationship takes center stage and there is the creation of a heterogeneous whole.

Articulations are “dynamic interminglings that can move in many and various directions, propelled by various and changing circumstances (of other articulations),” and the web of those articulations are known as ‘*assemblage*’” (Slack & Wise, 2005, p. 113). Technology as articulation and assemblage is the result of a nonmechanistic perspective of technology in which instead of taking technology as an autonomous entity it is treated as a connection like culture. Even if articulation and assemblage share some of the crucial features of an expressive causality perspective, articulation and assemblage are significantly different from expressive perspective since the notion of articulation takes culture as irreducible connections. Further, culture is taken as myriad of articulations. Technologies are developed, used and effective within a particular assemblage, and “new articulations are constituted in a revised (or rearticulated) assemblage” (Slack & Wise, 2005, p. 113). Technologies exist “only in relation to the interminglings they make possible or that make them possible.” (Deleuze & Guattari cited in Slack & Wise, 2005, p. 113). Since technologies exist in relation to particular articulations, they

are articulation themselves, and they are created, developed and used in the dynamic movement of assemblage as well as diffused within assemblage. Technologies are assemblage because they are “made up of webs of corresponding, noncorresponding, and contradictory articulations” (Slack & Wise, 2005, p. 113). Therefore, technology does not have one single essence, definition, purpose, role or effect. From the perspective of technology as articulations and assemblage, technological relationships consist of complex articulations that function in a particular context for technologies. Hence, there is not culture and technology, rather there is technological culture.

Technology users become accustomed to a particular technology when it becomes part of their lives. When technologies including the Web in general and an LMS in particular become part and parcel of the processes of users’ everyday life, technologies no longer remain discrete entities, rather, they get transformed into assemblage. Assemblage, drawn from the work of Deleuze and Guattari, is a concept dealing with the play of contingency and structure, organization and change. An assemblage is a collection of heterogeneous elements; it is not a set of predetermined parts put together in some predictable order, nor is it a random collection of things. An assemblage is a group of things, the relation among those things, the qualities they possess, and its effectivities (what it can do). To understand a technology, it is not enough to understand what it is, but it is necessary to understand “what it can do” (Wise, 2006, p. 4). Through the perspective of assemblage, technologies are not simply pieces of hardware or software but “a whole array of developments which seem to have same functioning, which seem to be constructing similar possibilities for agency” (Wise, 2006, p. 5). Technologies as assemblage have a power to change the way we act in this world. It is necessary to understand the popular narratives in a culture in order to understand these technologies. Even if the

dominant narratives may regard Web as the most democratic platform, it may not be the case to the users from peripheral cultural and linguistic backgrounds. Similarly, the dominant narratives may regard LMSs to be the most democratic/neutral/universal platforms whereas the writing students from peripheral cultural and linguistic backgrounds may not feel in tune with the dominant narratives particularly in a cross-cultural contact zone situation of writing classrooms.

Technologies, being part and parcel of everyday life, typically fade into habit or unconscious, and we no longer are aware of them and continue using them without questioning them. In this case, they become assemblage or articulations. Even if they are machines, they cannot be limited to mere machines because they have different connections whether in terms of their design or use. So, they are machines of different kinds. When we treat them as machines of different kinds we are “compelled to explore the culture, the cultural arrangement, and the flows within which these machines come to have a variety of meanings. We learn, as a result, more about everyday life, and more about technology as part of everyday life” (Slack and Wise, 2005, p. 100).

Since technology should not be treated alone, it is necessary to understand the notion of technology as articulation and assemblage. Slack and Wise (2005) argue that technology as articulation “draws attention to the practices, representations, experiences, and affects that constitute technology. Technology as assemblage adds to this understanding by drawing attention to the ways that these practices, representations, experiences, and affects articulate to take a particular dynamic form” (p. 129).

Technological assemblage, besides selecting, drawing together, staking out, and developing a territory that has bodies of machines and structures, also includes other bodies including knowledge as well as other articulations such as “actions, passions, practices, commitments,

beliefs, affects and so on” that give “shape to identity of surveillance technology” (Slack and Wise, 2005, p. 130). Technological assemblage is not a mere collection of articulations, rather, it is dynamic and undergoes constant transformation: “of what Deleuze and Guattari call deterritorialization and reterritorialization” (Slack & Wise, 2005, p. 132). According to Slack and Wise (2005), deterritorialization is a process of disarticulation and disconnection of some of the articulations whereas reterritorialization is the process of constituting new assemblage or territory through the creation of new articulations (p. 132). The transformational process consists of articulations that are subject to change, and rearticulations as assemblage contribute to reterritorialization in significant ways.

The notion of technological culture helps to explore student agency in a cross-cultural digital contact zone situation of FYC classrooms. Agency in this regard is an ability “to shape the paths of human and nonhumans” but not the intention (Wise, 2006, p. 3). According to Deleuze and Guattari, there are two types of agencies: “corporeal agency (bodies working on bodies, which they refer to as technology)” and “incorporeal agency (a body influences another body at a distance, through incorporeal means; they refer to this as language. Any social and cultural space consists of both types of agency, stratified” (Wise, 2006, p. 3).

Technology and language in historical moment determine “how things get done and the possibilities for agency at this historical conjuncture” since they are “considered to like two strata, or layers, of cultural space” (Wise, 2006, p. 3). This connection between technology and language and their function is an example of incorporeal agency which is regarded to be less problematic than the direct force since “it is seen as the ability to act at a distance, out of proportion to actual physicality” (Wise, 2006, p. 3). The manipulative power of web can be taken as an example of incorporeal agency since the absolute power of web through language creates

and influences the everyday world and its reality. Even if the development of web was regarded to be an example of democracy, it has actually represented the growing power of corporeal technology. The Web as a whole is not culturally neutral to citizens of other countries outside the US. As a result, people from other countries may interpret technologies including the Web as a global expansion of colonization in a particular historical context. The Web may seem less neutral and welcoming material for global communication to people or users from peripheral cultural and linguistic backgrounds. Hawisher and Self (2000) argue that the vision of the Web is a complicated and contested site for postmodern literacy practices because this site is “characterized by a strongly influential set of technical cultural forces, primarily oriented toward the values of the white, western industrialized nations that were responsible for designing and building the network and that continue to exert power within it” (p. 15). The Web possesses barriers for literacy practices because of its lacks local information and cultural diversities. According to Monroe (2004), this particular nature of the Web is shared by almost all the new media technologies (p. 15). Similarly, these new technologies including computers “serve as powerful cultural and catalytic forces in the lives of teachers and students” (Hawisher and Selfe, 1999, p. 2) in the process of treating teaching and research as social and political activities. Therefore, it is necessary to question and challenge technological determinism while composing in the digital/new media environment, and invite our writing students into the design of interface itself in order to ensure their agency in the digital contact zone through critical negotiation.

However, it is not easy to question technological determinism because new media technologies themselves have already deconstructed the notion of technological and cultural determinism through their use of mediation and/or remediation. Mediation and/or remediation are the most important approaches that new media technologies use to create reality, and no new

media technologies do their cultural functions in isolation from other medias. Nor do they function in isolation from other social and economic forces as well. The Web is the best example of new media technology as it cannot be treated as a mere software protocol or text and data files because it is also the sum of its uses for advertising, scholarship, personal expression, and so on. According to Bolter and Grusin (1999), these uses are “as much a part of the technology as the software itself,” and they are “agents in our culture without falling into the trap of technological determinism” (p. 19). New media technologies are not forces external to a culture, rather, they “emerge from within cultural contexts, and they refashion other media, which are embedded in the same or similar contexts” (Bolter & Grusin, 1999, p. 19). They accomplish these activities through the act of mediation or remediation in which mediation is the remediation of reality because media themselves are real and because the experience of media is the subject of remediation” (Bolter & Grusin, 1999, p. 59). From this perspective, the democracy in the Web is resulted through its immediacy since this sense of immediacy is interchangeably used for democracy. In practice, immediacy may enhance user function, however, it has nothing to do with democracy since it does not represent users from various cultural and linguistic backgrounds in terms of its design.

New media technologies never operate in isolation from other media, and they pass through several stages of earlier or current media. Bolter and Grusin (1999) argue that the Web today is “eclectic and inclusive and continues to borrow from and remediate almost any visual and verbal medium we can name” (p. 197). That is the reason why web interfaces are not transparent, since the Web is dominated by hypermediacy that attains “the real by filling each window with widgets and filling the screen with windows” (Bolter & Grusin, 1999, p. 210). Hence new media technologies in general and LMS in particular cannot be treated in isolation



from their designers' cultural, social and linguistic norms and values. Media technologies play a crucial role in creating and disseminating a techno-cultural hegemony in a cross-cultural digital contact zone of FYC.

## **2.2 TECHNOLOGY AS A CULTURE AND TECHNO-CULTURAL HEGEMONY**

Technology cannot be separated from culture, and it is necessary to understand that media technologies are not born innocent, rather, they arise from the existing patterns of social relations. It is a must to understand the role of new media technology in our society for a number of reasons because “(1) new media technology plays a central role in changing global political economic configurations; (2) new media technology contributes to defining a new organization of knowledge, the information age; and (3) new media technology plays a conspicuous role in popular culture” (Slack and Wise, 2005, p. 143). These particular functions of new media technologies become crucial in a cross-cultural digital contact zone situation of FYC where students from diverse cultural and linguistic backgrounds come together for cross-cultural collaboration because new media technologies such as LMS seem to be privileging one group of students over many others by default. Writing students in a contact zone perceive these new media technologies differently, and students from periphery cultural and linguistic backgrounds may feel that these new media technologies are creating a techno-cultural hegemony.

Because technology and culture are not two distinct entities, technology and culture have a particular way of presenting themselves in terms of their relationship to other cultures in this world. New media technologies appear neutral while imposing dominant ideology upon subordinate cultures. As a result, people either believe that technologies are totally neutral, hence innocent, or people believe that technologies are biased. People tend to create binaries and go with one of them even if the binaries in the dichotomy cannot “adequately explain the

complexity of either everyday discourse about, or mobilization of, technology,” since they are “inadequate to the task of explaining the theoretically acknowledged complex imbrication of technology and culture” (Slack and Wise, 2005, p. 144). Even if the dichotomy assumes that technology and culture are separate phenomena, they are not in reality.

It is necessary to understand culture to understand technology itself since the two cannot be separated from each other. Understanding one helps us understand the other in a better way since they are articulations. Hall’s (1986) theory of articulation can be very useful in order to understand the relationship between culture and technology because it tells us how technology and culture are influenced by each other. Slack (1989) also treats technology as an articulation, “a nonnecessary connection of different elements that, when connected in a particular way, form a specific unity” (p. 331). For example, she takes a personal computer as an example of technology that is articulation of hardware, software, network, etc., all of which are further connected to economy, ideology, politics, policy, etc. in a variety of ways. From this perspective, technology as a generic term and the computer as a specific technology are “contingent rather than determined, dispersed rather than discrete” (Slack and Wise, 2005, p. 146). The relationship between culture and technology is reframed to foreground the connections that constitute technology.

Culture, being an articulation, is one of the most difficult concepts in English language. Broadly, culture refers to a set of established values and a way of thinking and behaving that is passed from generation to generation. Culture works as a guiding force in every aspect of life including the way people learn since it “shapes the behavior of students in classrooms and employees in the workplace” (Bosley, 2004, p. 468). For example, Euro-North American culture places its highest values on the ideal of individual whereas Asian and South American place

highest values on the communal feelings. These cultural differences play a great role the way people perceive their surroundings and communicate their perceptions and learning. From this perspective, culture refers to something that reveals itself in social behaviors like beliefs, ideas, language, customs and rules. Hence, it is a “set of shared and enduring meanings, values, and beliefs that characterize national, ethnic, or other groups and orient their behavior” (Faure, 2002, p. 393). It is for the same reason that nationality, ethnicity or other communal characteristics are put broadly within the framework of culture even if there can be differences among people within a nation, culture, and ethnicity. Further, from the perspective of technology use in the cross-cultural digital contact zone in FYC, students from the dominant cultural and linguistic background may not have to lose anything that belongs to them, whereas students from periphery may have to forget their social, cultural and linguistic norms and values and learn dominant cultural and linguistic norms and values since new media technologies are simple expressions of dominant culture.

Culture is behavioristic, and cultural ideology firmly indoctrinates people’s everyday life. From the behavioristic perspective, culture can be defined as a mental framework itself since everyone has certain ways of thinking, feeling, and acting. These individual characteristics are developed in the childhood of an individual and remain as a mental pattern in an individual’s mind. Therefore, Hofstede, Hofstede and Minkov (2010) call these different ways of thinking, feeling, and acting, “mental programs,” or “software of the mind” (p. 5). For them, this mental program or software of the mind is none other than the culture itself. According to them, culture is always a collective phenomenon because it is at least partly “shared with people who live or lived within the same social environment, which is where it was learned,” and it consists of “the unwritten rules of the social game” (p. 6). It is also a “collective programming of the mind that

distinguishes the member of one group or category of people from others” (p. 6). It is a learned behavior from the environment rather than an innate entity that is passed from one’s genes. Culture is neither a human nature nor an individual personality because human nature, in strict sense, is universal and inherited whereas personality is specific to a particular individual and both inherited and learned. Culture is specific to a particular group or category, and it is learned. According to Hofstede, Hofstede and Minkov (2010), our environment includes “symbols (such as language), heroes (such as our parents), and rituals (such as toilet training), and, most important, it includes our basic values” (pp. 9-10). In their view, values are implicit and belong to the invisible software of our minds. There are abundant amount of intercultural encounters even in this world of modern technology because our mental software contains those basic cultural values. These cultural values that remain unconscious form “the basis of our conscious and more superficial manifestations of culture: rituals, heroes, and symbols” (Hofstede, Hofstede and Minkov, 2010, p. 384). When a person from one culture tries to learn those rituals, heroes, and symbols of a new culture, it is difficult for him or her to recognize the underlying values of another culture. As a result, the visitor in a foreign culture “returns to the mental state of an infant, in which the simplest things must be learned over again. This experience usually leads to feelings of distress, of helplessness, and of hostility toward the new environment” (Hofstede, Hofstede and Minkov, 2010, p. 384). The learner has to unlearn his or her cultural values first in order to learn the values of new culture at the time of acculturation. It is a very difficult process, and it makes the learning process very slow and difficult. The same process applies in the use of Learning Management Systems in the cross-cultural contact zone situation of FYC since an LMS cannot be separated from the culture of the designers of these systems. As a result, writing

students from peripheral cultural and linguistic backgrounds have to unlearn their culture and language to learn the dominant culture or its LMSs for that matter.

The concept of culture as a collective programming of the mind resembles Bordieu's (2011) concept of habitus. His notion of habitus refers to a system of dispositions and functions as the basis for practices as well as images that can be orchestrated collectively without an actual conductor (pp. 88-89). His notion of cultural capital is equally applicable here as this notion of cultural capital plays a great role for having power or not having it. Bourdieu (2011) argues that the structure of the field or the unequal distribution of capital is "the source of the specific effects of capital, i.e., the appropriation of profits and the power to impose the laws of functioning of the field most favorable to capital and its reproduction" (p. 86). He argues that the cultural capital in its objectified state presents itself "with all the appearances of an autonomous, coherent universe" that has its own "laws, transcending individual wills," and it "remains irreducible to that which each agent, or even the aggregate of the agents, can appropriate (i.e., to the cultural capital embodied in each agent or even in the aggregate to the agents)" (p. 87). But it should not be forgotten that cultural capital is both symbolically and materially active, and it is only the effective capital that is appropriated, implemented as well as invested as a weapon by its agents in the struggle of cultural production and class struggle thereafter.

Bordieu's theory of habitus helps understand the notion of everyday culture that is concrete, contextualized, and lived, because habitus is located within a social space. It has both temporal and special dimensions. According to Fiske (1992), the spatial dimension models social space as a dynamic relationship among major determining forces such as economic, class, education, culture and their materialization in the behavior, tastes, and dispositions of people. People embody and enact those forces because of their different positions within a particular

social order. On the other hand, the temporal dimension signifies the trajectories of social formations and individuals within those formations and the change in their geographical positioning through historical movements (p. 163). The differences in people's everyday lives are "a site of struggle between the measured individuations that constitute social discipline, and the popularity- produced differences that fill and extend the spaces of power of the people" (Fiske, 1992, p. 162). The notion of habitus offers theoretical framework to the concrete, contextualized and lived everyday culture.

Besides being concrete as everyday lived experience, culture is also abstract as it is related to human consciousness. Culture flows "back and forth through the domains of collective consciousness, subconsciousness, memory, and social practice" and "exists abstractly as a group's customs, mores, traditions, values, and institutionalized ideas, but it also takes form in how such abstractions materialize in routine social interaction" (Lull, 2000, p. 130). For Lull (2000), its meaning emerges precisely in the "dynamic nexus between abstraction and practice, between the pervasive and enduring mental structures of deep culture and the less entrenched surfaces of everyday life" (p. 130). According to him, culture provides grounds upon which we form our both personal and collective identities as well as facilitates a sense of belonging to wider social communities. Because it is founded on a premise of a human requirement, culture also gives us opportunities to express individuality and personal style. (p. 134). From this perspective, when an LMS represents dominant cultural and linguistic norms and values in the cross-cultural digital contact of FYC, students from peripheral cultural and linguistic backgrounds may feel alienated when they do not have an appropriate online environment that relates to their cultural and linguistic knowledge and experience.

Further, culture can be recognized as a social field where goods and social practices are produced, distributed, and consumed as well as invested with various meanings and ideologies that are implicated in the generation of political effects. For Giroux (2009), culture is partly defined as a:

[c]ircuit of power, ideologies, and values in which diverse images and sounds are produced and circulated, identities are constructed, inhabited, and discarded, agency is manifested in both individualized and social forms, and discourses are created which make culture itself the object of inquiry and critical analyses. (p. 89).

He argues that culture is constitutive and political and both “mediates” as well as “shapes” history as well as it is the “primary terrain for realizing the political as an articulation of an intervention into the social, a space in which politics is pluralized, recognized as contingent, and open to many formations” (p. 91). He also argues that it is a crucial terrain in order to “render visible both the global circuits that now frame materials relations of power and a cultural politics in which matters of representation and meaning shape and offer concrete examples of how politics is expressed, lived, and experienced” (p. 91). From this perspective, culture, which is the ground of both contestation and accommodation, is inherently characterized by the rise of mega corporations and new technologies which are “transforming the traditional spheres of the economy, industry, society, and everyday life” (Giroux, 2009, p. 91). Mega corporations and new technologies use narratives, metaphors, and images that support a myth of global village and democracy. LMS designers may borrow these narratives to give a picture of the Web as a creator of global village and participatory democracy, however, the users from diverse cultural and linguistic backgrounds may not experience the sense of global village and democracy when they use it in the cross-cultural digital contact zone situation of FYC.

Culture also refers to “material production” (Williams, 1985, p. 91). Since material production is specific to social relation within a historical framework, culture can be associated to types of society, social relationship and human culture in relation to specific historical conditions which are most of the time determinate. In this sense, production cannot be isolated from these historical conditions since it is production that determines social relationships in a historical condition. From this perspective, culture can symbolize “the arrangement- the forms- assumed by social existence under determinate historical conditions” where social “refers to the content of the relationship into which men involuntarily enter in any social formation whereas culture refers to “the forms which those relations assume” (Hall, 1977, p. 318). From this perspective, culture refers to society and social relations. Since culture and new media technologies in general and an LMS in particular cannot be separated from each other, this particular fact makes an LMS more exclusive despite its designers’ great attempt to present it as neutral and universal. This LMS design strategy cannot remain implicit or unchallenged in the cross-cultural digital contact zone where users from different cultural and linguistic norms and values come together for a cross-cultural collaboration in a FYC classroom.

Culture is also an ideology that the dominant group tries to appropriate in its favor. In this sense, ideology is a “set of ideas which arise from a given set of material interests or, more broadly, from a definite class or group, has been at least as widely used as the sense of ideology as illusion” (Williams, 1985, p. 156). It is an organized thought that includes sets of values, orientations, and predispositions expressed through technologically mediated interpersonal communication. These sets of values, orientations and predispositions are also internally coherent ways of thinking or points of view. Since they are organized thoughts, they are not necessarily innocent. Rather, they serve a purpose. From this perspective, new media



technologies in general and LMS in particular are also serving a particular cultural purpose in the cross-cultural digital contact zone situation of FYC. The LMS designers seem to indirectly mean that the universalism and neutrality of an LMS environment can be the only way of designing an LMS. That way, the LMS designers recognize the dominant cultural and linguistic norms and values.

Hall (1977) argues that ideology has a “de-centering” as well as “displacing effect on the freely developing processes of human culture” (p. 320). Because of this decentering and displacing nature, ideology necessitates thinking about different levels of social formation. Ideology should be accounted for mechanisms that consistently sustain as a set of representations. Further, ideology is something that is “most open, apparent, manifest- what takes place on the surface and in view of all men” (Hall, 1977, p. 325). Things hidden and repressed are just its foundations and they are the source or site of its unconsciousness. According to Hall (1977), ideologies are social structures that are “perceived-accepted-suffered cultural objects and they act functionally on men via a process that escapes them” (p. 326). Hence, ideologies are related to the realms of lived experiences rather than conscious thought. They are related to the way humans live the relation between human beings and their conditions of existence.

Ideology is also a great source of hegemony. There are central system of practices, meanings and values known as dominant and effective system in every historical. These dominant or effective systems are also known as process- the process of incorporation in which selective values are embraced discarding the outsiders. The dominant system keeps on making and remaking the process in order to contain those selective values that are oppositional. This particular notion of incorporating selective values is related to Gramscian notion of hegemony in

which the ruling class is able “not only able to coerce a subordinate class to conform its interests, but exerts a total social authority over those classes and social formation as a whole” (Hall, 1977, p. 332). Hegemony is the combination of both force and consent. Consent dominates force in the liberal capitalist state. Hegemony works with the help of ideology in which the dominant class defines reality in its favor. Hegemony as a consent is accomplished through the agencies of the superstructures such as the family, education system, the church, the media and cultural institutions. The coercive hegemony sides of the state are law, police, and army even if they work through ideology partly. Hegemony is not a permanent phenomenon, and it can only be established and analyzed in concrete historical junctures in which the subordinated classes are not strong or sufficient enough to represent a counter-hegemonic force to the existing hegemonic order. Because of this hegemonic nature of culture and technology the LMS designers, writing program administrators and even instructors try to establish an LMS as a neutral and universal platform in a cross-cultural digital contact zone. As a result, writing students from periphery cultural and linguistic backgrounds may believe that an LMS is inclusive without looking at it critically from their own perspectives. However, it would be better to encourage writing students to look at an LMS critically in the cross-cultural digital contact zone situation of FYC. Writing students should be able to question techno-cultural hegemony in order to create inclusive LMS platforms through their input in LMS interface design.

Ideology plays a great role in supporting dominant capitalist order by representing the dominant class as individual economic units driven by private and egoistic interests alone. According to Hall (1977), the ideological effect appears to be that of “*masking and displacing*”, that of “*fragmentation* or separation” and that of “imposing an imaginary unity or coherence on the units of so re-presented” or “replacing the real unity of the first level with imaginary lived

relations” (p. 337, emphasis in the original). In an ideology that feeds hegemony, it takes place an attitude of “*generalization and universalizing* of class interest into the general interest” (Hall, 1977, p. 340). In such a situation, technology, digital technology or media in general for that matter, play a crucial role in creating and disseminating dominant ideologies. The grip of digital technology or media is wider and greater than the traditional cultural channels, and the whole sphere of public information, intercommunication and exchange i.e., production and consumption of social knowledge in societies of this type depends upon the mediation of the modern means of communication. In this sense, LMSs in a cross-cultural digital contact zone situation play a crucial role in normalizing dominant ideologies.

Hegemony is the result of power differential that can result in terms of political-economic-cultural relations between groups, nations states and social classes. However, hegemony cannot be limited to power difference as it can be used by the dominant group in the society as a method for gaining and maintaining power. Lull (2000) argues that “[i]f ideology is a system of structured representations, and consciousness is a structure of mind that reflects those representations, then hegemony is the linking mechanism between dominant ideology and consciousness” (p. 48). Because of this, hegemony heavily depends on widespread circulation and social acceptance of the dominant ideology. Since ideology plays a crucial role in gaining and maintaining power in the society, the dominant culture tries its best to create and maintain hegemony through media or technology. With this, the subordinate cultural group eternalizes the dominant ideology that helps powerful group to perpetuate its domination. Lull (2000) argues that “Gramsci’s theory of hegemony, therefore, connects ideological representation to culture through everyday social interaction. *Hegemony requires that ideological assertions become self-evident cultural assumptions*” (p. 50, emphasis in the original). The effectiveness of hegemony

depends on whether the subordinated people accept it as a “normal reality or commonsense” in their everyday practice or not (Williams, 1985, p. 145). If they give consent to that hegemony at the social level or cultural level, the dominance perpetuates. In this way, technology helps the dominant cultural group perpetuate its hegemony. Microsoft Windows can be taken as an example to illustrate this point. As an operating system housed on many computers around the world, Microsoft represents much more than a technological development and a business venture; it never just moves information around the world without bias. Rather as Lull (2000) argues “Windows is ideological and cultural too. The domination of English language, together with all the Anglo-American pop culture that is celebrated on the Internet, contributes to the hegemonic effect. Microsoft’s actions affect everyone, not just the company’s business competitors” (p. 61). As a result, cultural differences are minimized as the world comes together to use Microsoft products. Thus, the dominant group is able to legitimize its position. The current design of LMSs are serving the same purpose in the cross-cultural digital contact zone of FYC despite the fact that writing students from diverse cultural and linguistic norms and values as well as backgrounds belong to the FYC discourse community.

### **2.3 POLITICAL ECONOMY APPROACH TO TECHNOLOGICAL CULTURE**

A political economy approach to technological culture centers on the production and distribution of technological culture as it calls attention to “to the fact that the production and distribution of culture takes place within a specific economic and political system constituted by relations between the state, the economy, social institutions and practices, culture, and organizations like the media” (Kellner, 2009, p. 9). The political economy approach to culture incorporates economics and politics and their relationship to other central structures of society and culture. According to Kellner (2009), political economy highlights that “capitalist societies

are organized according to a dominant mode of production that structures institutions and practices according to the logic of commodification and capital accumulation” (p. 9). In such a system, cultural production and distribution are guided by profit-making market strategies. Technology production forces are shaped according to dominant relations such as profit imperatives and maintenance of hierarchical control. The market plays a great role in what type of cultural artifacts are produced and consumed in this type of system. Therefore, the relations between economic, political, and technological cultural dimensions of social reality come together in deciding the type of cultural production.

The role of technological culture is very crucial in cultural production in this period of technological revolution. Hence, the analysis of political economy must engage the dominant forms of technology. Similarly, in a period of capitalistic hegemony like this, political economy grounds “its approach within empirical analysis of the cultural system of cultural production, investigating the constraints and structuring influence of the dominant capitalist economic system and a commercialized cultural system dominated by powerful corporations” (Kellner, 2009, p. 9). The system of culture in within which a technology is produced and distributed helps technology users understand the cultural influence in its design. What types of products to be produced, what structural limits to be reflected in a product and what audience effects cultural artifacts should generate are all determined by the system of production. Sometimes these effects are circumscribed and reduced to mask the reflection of dominant ideology in the technological cultural production, but it should not be forgotten that technological cultural productions always support capitalistic values in either case. It is the very law of the capitalistic market. Therefore, it is necessary to look at contemporary society and culture as contested terrains. This is more a case in the era of globalization like this in which global networks produce and distribute culture in the

interest of profit and corporate hegemony. In this process, “the emergence and proliferation of new technologies are constantly creating novel cultural forms and hybrids of previous culture, thus the interconnection of economy and technology is an important component of a critical media/culture studies” (Kellner, 2009, p. 12). Therefore, it is necessary to develop critical perspectives to understand this hidden strategy and re/design (alternative) technologies to create counter-hegemony against the cultural hegemony through technology. It is necessary to work against technological hegemony through designing technology incorporating subordinate cultural and linguistic norms and values. Cultural studies can be taken as a helpful tool in this process because it attempts to “negotiate the split between manipulation theory, which sees mass culture and society in general as dominating individuals, and populist resistance theory which emphasizes the power of individuals to oppose, resist, and struggle against the dominant culture” (Kellner, 2009, p. 20). Further, it enables individuals to resist technological manipulation and to increase their freedom and individuality. It can empower people both to gain sovereignty over their culture and to be able to struggle for alternative cultures and political change, and thus is committed to radical democracy. This particular issue of technological hegemony is very sensible in the cross-cultural digital contact zone of FYC as the design of technology privileges dominant culture and language over many other cultures and languages. New media technology design in general and LMS design in particular may alienate writing students who do not belong to dominant cultural and linguistic backgrounds. Therefore, it is very important to involve writing students from subordinate cultures to design LMS interfaces in order to deconstruct technological cultural hegemony and create democratic environment in these platforms.

New media technologies are used to enforce the cultural hegemonies by the dominant culture. Johnson (1998) argues that “[t]echnology helps shape the discursive and material

characteristics of cultures. As technologies emerge and are incorporated into a cultural context they alter not just the immediate activity for which they were designed but also have ‘ripple effects’ in defining ways” (p. 89). Feenberg (2010) also argues that “[t]he legitimating effectiveness of technology depends on unconsciousness of the cultural horizon under which it was designed. A re-contextualizing critique of technology can uncover that horizon, demystify the illusion of technical necessity, and expose the relativity of the prevailing technical choices. A politics of technology can demand changes reflecting the critique” (p. 18). The finding of new ways to privilege excluded values will lead to the democratization of technology, and technical work would take on a different character with cultural studies. New or alternative approaches to technology can be presented through the use of cultural studies since it has always been concerned to “examine critically and to restructure the relationship between dominant and subordinated cultures,” and to interrogate “the relationship between the academy and the rest of the social order” (Fiske, 1992, p. 165). This study of cultural studies can be very helpful in the study of technology design in the cross-cultural digital contact zone of FYC since it can encourage FYC students to deconstruct techno-cultural hegemonies and advocate for cross-cultural technology design for a particular context such as FYC classroom.

## **2.4 CULTURAL STUDIES**

Cultural studies, like culture, is not one idea, but it is anything and everything (Hall, 1990, p. 11). It is very broad because it is a whole total of “a series of regroupings and revisionings, issues considered, questions asked, responses offered, topics explored, risks taken and directions tried” (Slack and Wise, 2005, p. 142). It is more an art than a science because an artistic movement is shaped by “the goals, concerns, challenges and interests of the participating artists and evolves along with the changes they initiate, so too is cultural studies shaped loosely

by the participants in the conversation, evolving as the conversation changes” (Slack and Wise, 2005, p. 142). It interrogates the asymmetrical cultural relation and notion of agency and subjectivity according to which some people are more powerful than others. According to Kolko (2000), it is about “particular interrogation of the subject in relation to the larger culture” as well as “questions that take issue with the ways in which the society constructs individuals” (p. 33). And the issue of agency and subjectivity is firmly associated with the whole production of the signifying practices in society. Berlin and Vivion (1992) argue that “[c]ultural studies then deals with the production, distribution, and reception of signifying practices within the myriad historical formations that are shaping subjectivities” (p. ix). According to them, myriad historical formations range from the family, the school, the work place, and the peer group to the more familiar activities associated with the cultural sphere, such as the arts and the media and their modes of production and consumption (p. ix). Technology has been playing a crucial role in creating the signifying practices since it is designed and disseminated by the dominant culture to work in the favor of the dominant group in this digital world.

Cultural studies puts emphasis upon the cultural practices that circulate in society, and it opens the possibility for understanding a wide variety of new cultural forms. According to Giroux (2009), cultural studies has become especially important at a time when new electronic technologies and the emergence of visual culture as a primary educational force have offered new opportunities to inhabit knowledge and ways of knowing. These new opportunities to knowledge and ways of knowing simply do not correspond to the long-standing traditions and officially sanctioned rules of disciplinary knowledge or of the one-sided academic emphasis on print culture. Giroux (2009) believes that the scope and power of these new informational technologies, multimedia, and visual culture warrant that educators become more reflective. As a



result, educators think about engaging both the production, reception, and situated use of new technologies, popular texts, and diverse forms of visual culture and how they structure social relations, value, particular notions of community, and varied definitions of the self and others. (pp. 95-96). Cultural studies approach can be invaluable to FYC administrators and instructors in designing their writing curriculum, syllabi and selecting appropriate pedagogies and pedagogical tools such as LMSs appropriately in the cross-cultural digital contact zone.

Cultural studies is concerned with cultural practices in the context of the unequal relations of force and power. Context plays a great role in relation to the cultural practices and the relations of power in cultural studies because the cultural practices and the relations of power articulate the unity and specificity of the context as a lived environment. According to Grossberg (2009), it helps cultural studies not to reduce culture to power, due to which, cultural studies tends to look at culture itself as the site of the production and struggle over power, where power is understood as unequal relation of forces in the interests of particular fractions of the populations (p. 27). Cultural studies is constructed by articulating its practice into particular projects and formations at any particular time and place. Cultural studies always and only “exists contextually specific to a particular political project based on the available theoretical and historical resources” (p. 31), and always “reflects on and situates itself and its claims, limits its field, acknowledges its incompleteness” (Grossberg, 2009, p. 31). This particular knowledge of cultural studies can encourage writing students in the cross-cultural digital contact zone to be aware of technological design and their use in a particular context.

Cultural studies is interventionist in its approach because cultural studies attempts to use best intellectual resources for a better understanding of the relations of power in a particular context that enables people to change the context as well as relations of power. As a result,

cultural studies projects always are related to politics that are contextually defined. According to Grossberg (2009), cultural studies seeks to understand not only “the organizations of power” but also “the possibilities of struggle, resistance and change,” and it takes contestation as an “assumption necessary for the existence of critical work and political opposition” (p. 31). Cultural studies takes the search for an objective truth in its attempt to recognize knowledge and power as inseparable, and it prioritizes new forms and articulations of authority built on the effectiveness of knowledge over the status of the producer. Cultural studies is always dedicated to produce the best knowledge possible with the help of sophisticated intellectual tools. In doing so, it takes the help of rigorous education, intellectual argument and analysis, empirical research without denying the existence of traditions that need to be read and contemplated. From this perspective, it is a practice that attempts “to maintain the discipline of authority in the face of relativism” as well as seeks “to give a better understanding of where ‘we’ are so ‘we’ can get somewhere else, hopefully somewhere better, leaving open the question of what is better and how one decides, as well as the question of who ‘we’ are” (Grossberg, 2009, p. 32). Secondly, because of radically contextualist nature of cultural studies, it studies the relationships between culture and society as “contextually specific- the product of power- and hence, they cannot be assumed to transcend particular contexts” (Grossberg, 2009, p. 33). Therefore, cultural studies should not be mistaken as a theory of ideology, representation, identity, subjectivity or communication. It is anti-reductionist in its approach. Cultural studies can be useful in the cross-cultural digital contact zone situation of FYC to study technological culture without reducing the irreducible differences among students from various cultural and linguistic backgrounds.

Interventionist commitments of cultural theorists of new media technology lead them to trace significant articulations and to remap or rearticulate them. Slack and Wise (2005) argue

that “[m]ethodologically, cultural studies has an affinity with the practice of genealogy, as it has come down to us from Nietzsche, via Foucault. Genealogy is explicitly opposed to the progress narrative. It does not assume a single, evolutionary direction; it does not assume that ideas or practices retain their logic” (p. 149). Cultural studies directs itself to directions where multiple factors come into play and create intense situation of struggle and overcome in a forceful way. The function of genealogy is to record the singularity of events outside of monotonous finality. Hence, the genealogical approach of cultural studies can help in questioning the current technological design in general and an LMS in particular.

Cultural studies is a version of social construction of reality that assumes that reality is a total construction of our social and cultural practices, and it acknowledges the role of material realities that are being struggled over, articulated, treated as real because of their measurable effects. Cultural studies believes that forms of reality and kinds of practices that shape human beings should be recognized because they cannot be reduced to one or the other. Grossberg (2009) argues that “cultural studies does not believe that culture can be explained in purely cultural terms, nor does it believe that everything is culture; rather, it believes that culture can only be understood in terms of its relations to everything that is not culture. In this sense, cultural studies is always materialist” (p. 34). This materialist view of cultural studies helps writing students understand that new media technologies in general and LMSs in particular are not mere machines or innocent tools, rather, they are artifacts. These new media technologies include some users whereas exclude others in terms of cultural and linguistic contexts they are created since many techno-cultural relationships come into play at the time of their design.

Being radically contextualist, cultural studies is concerned with the role of cultural practices in the construction of the contexts of human life as milieus of power. Its main study

area is concerned with “how relations of force (effectively) are organized into relations of power by the discursive practices that constitute the lived world as human” (Grossberg, 2009, p. 35). Cultural studies assumes that the discursive practices are within the relations or context, and, therefore, it always constitutes its object “as an alliance, a set of relations among practices” that “cannot be identified with texts and certainly not with any particular genres of texts, or contexts within contexts, always and already articulated to and by relations of power” (Grossberg, 2009, p. 35). An alliance refers to an event that is constituted with the constitutive of larger contextual relationships. Alliance refers to the set of practices in a delimited social space. From this perspective, cultural studies can be instrumental in the study of power relationships in a technology design and question unequal representations and user access because of technology design between diverse technology users in a cross-cultural digital contact zone.

Cultural studies in relation to writing pedagogy can be equally important in the cross-cultural digital contact zone of FYC. Giroux (2009) argues that it makes educators aware of the importance of context since “how we respond as educators and critics to the spheres in which we work is conditioned by the interrelationship between the theoretical resources we bring to a specific context and the worldly space of publicness that produces distinct problems and conditions particular responses to them” (p. 93). It can help the teachers make their pedagogy contextual so that it can embrace student experience in the classroom. It helps them develop “context-dependent learning that takes account student experiences and their relationships to popular culture and its terrain of pleasure, including those cultural industries that are often dismissed as producing as mere entertainment” (Giroux, 2009, p. 94). It also motivates teachers to develop curriculum that includes student experiences from different cultural, linguistic, economic, social backgrounds. It at least “provides the theoretical tools for allowing teachers to

recognize the important, though not unproblematic, cultural resources that students bring to school and the willingness to affirm and engage them critically as forms of knowledge crucial to the production of the students' sense of identity, place, and history" (Giroux, 2009, p. 94). This particular curriculum also encourages students to explore their cultural, social, linguistic backgrounds and practices in the process of knowledge creation and dissemination at the social level. This particular pedagogical knowledge will be invaluable in the selection of digital technology for a writing classroom as well as to transform them to democratic spaces.

Cultural studies is politically driven and committed "to producing knowledge which both helps people understand that the world is changeable and that offers some direction for how to change it" (Grossberg, 2009, p. 40). It believes that politics is also context specific, and it tries to understand political sites, goals, and forms of struggle contextually. Besides, it tries to understand politics as a theory and demands certain distance from existing constituencies of politics. On the other hand, Giroux (2009) argues that it encourages educators to use "highly disciplined" and "rigorous theoretical work" to reject both intellectual authority and anti-intellectual in the period of political and epistemological relativism (p. 92). Further, Giroux (2009) argues that cultural studies stress upon the analysis of public memory as a series of ruptures and displacements. From this perspective, historical learning is not about constructing a linear narrative but about "blasting history open, rupturing its silences, highlighting its detours, acknowledging the events of its transmission, and organizing its limits within an open and honest concern with human suffering, values, and the legacy of the often unrepresentable or misrepresented" (Giroux, 2009, p. 96). This political outlook assumes that history is not an artifact to be merely transmitted, rather, it is an ongoing dialogue and struggle over the relationship between representation and agency. This contextual political approach of cultural

studies helps writing students understand the “politics of interface” (Selfe & Selfe, 1994), and it makes them aware of context whether in their everyday writing or designing interface of new media technologies in general or LMS in particular.

Cultural studies is interdisciplinary in its approach. It means that it operates at “frontiers of intellectual life,” that it pushes “for new questions, new models, and new ways of study” and refuses “to be slotted into the existing divisions of knowledge” without excluding social, economical and political factors even if they seem to be out of cultural context (Grossberg, 2009, p. 41). Hence, it is about

[m]apping the deployment and effects of discursive practices and alliances within the context of specific social spaces and milieus. It is about the relations of articulations between: (1) discursive alliances as the configurations of practices which define where and how people live specific practices and relations; (2) the practices and configurations of daily life (as the sites of specific forms of determinations, controls, structures of power, struggles, pleasures, etc.; and (3) the apparatuses of power that mobilize different practices and effects to organize the space of human life and the possibilities of alliances. (Grossberg, 2009, p. 45)

Giroux (2009), like Grossberg (2009), talks about cultural studies’ interdisciplinary approach, but unlike Grossberg, he uses the term transdisciplinary. Giroux (2009) argues that cultural studies’ emphasis on transdisciplinary work is important because it “provides a rationale for challenging how knowledge has been historically produced, hierarchically ordered, and used within disciplines to sanction particular forms of authority and exclusion” (p. 95). With this “the established academic division of labor, a transdisciplinary approach raises important questions about the politics of representation and its deeply entrenched entanglement with specialization,

professionalism, and dominant power relations” (Giroux, 2009, p. 95). Through the use of different terminologies and approaches to study culture, both Grossberg (2009) and Giroux (2009) emphasize technological culture as articulation and assemblage as discussed at the beginning of this chapter. Culture as articulation will be further discussed in detail in Chapter four when it is brought into the discussion to bridge the gap between activity theory and genre.

To sum up, technology and culture are not two different entities, rather they are one and they are known as technological culture. This chapter discussed how media technologies in general and LMS in particular create and perpetuate cultural and other hegemonies in the cross-cultural digital contact zone situation of FYC as well as how these new media technologies may alienate writing students from periphery cultural and linguistic backgrounds. This chapter also discussed how the use of cultural studies approach helps writing students and instructors develop critical perspectives towards new media technologies in general and LMS in particular. This particular knowledge of technological culture, techno-cultural hegemony and use of cultural studies approach helps deconstruct those technological and cultural hegemonies and transform them into cross-cultural platforms through their interface re/design. Therefore, Chapter three is going to deal with the importance of new media interface re/design.

## **Chapter 3: Interface design and its contribution to designer agency and writing**

### **3.1 DIFFERENT DYNAMICS OF INTERFACE**

Because this study analyzes cross-cultural technology design in general and LMS design in particular in a cross-cultural digital contact zone of FYC classrooms in US universities, it is necessary to understand some technological issues and their different dynamics after being informed about techno-culture in Chapter two. This chapter defines interface, discusses different dynamics of interface as well as explores some advantages of interface design by periphery writing students in a cross-cultural digital contact zone. Since this study advocates for a higher-level interactivity in LMS platforms that will allow writing students to manipulate their design in terms of both content and form, interface is the gateway to allow writing students to exercise their rhetorical power through their design activities in a cross-cultural digital contact zone. An equal level of interaction in terms of form and content in cross-cultural collaboration is possible only when writing students from culturally and linguistically diverse backgrounds are able to customize LMS interfaces according to their needs. Understanding the meaning, scope and rhetorical nature of interface helps writing instructors understand how inviting writing students from peripheral cultural and linguistic backgrounds can empower those students. After providing a basic introduction of interface in Chapter one, this chapter is going to look at interface as cultural and linguistic borders as well as electronic environments. This chapter also relates interface and its design to student agency and student digital writing and research and treats the interface as a cultural and linguistic contact zone. It additionally treats interface as genre ecology to explore the relationship between interface design and digital writing and research from the interface as an electronic environment.



### **3.2 INTERFACE AS A BASIC INTERACTION**

As it has already been defined in Chapter one, interface refers to a place of interaction between two parties, systems, or disciplines. Whenever there is an interaction, the notion of interface exists. Hence, interface can be regarded as the common meeting point and place of interaction for the technological, human, social, and cultural aspects which make up computer-mediated communication and, more specifically, new media. Interface is a relationship builder between users, technologies and users' social, cultural and linguistic norms and values. According to Selber (2004), interface refers to a place where different agents and contexts are connected to each other, and it is also a space where communicative process is centered. (p. 141). In course of defining interface, Selber (2004) goes beyond the design of functional screen elements and takes psychological and emotional elements into consideration to include social and political dimensions in which human action is an essential element or condition of interface.

With regard to LMS interfaces in the cross-cultural contact zone situation in FYC classrooms in US universities, the definition of interface goes beyond the concept as a simple meeting point. According to Marcus and Gould (2012), user interfaces conceptually consist of five components: (1) metaphors, (2) mental models, (3) navigation, (4) interaction and (5) appearance (p. 343). Metaphors refer to concepts “conveyed through words and images, or through acoustic or tactile (haptic) means” whereas mental models refer to the “[o]rganization of data, functions, tasks, roles, and people in groups at work or play” (p. 343). In other words, mental models refer to the organization of the user interface itself that is then learned or understood by users. Navigation refers to “[m]ovement through mental models, afforded by windows, menus, dialogue areas, control panels, touch screens, and so on” whereas interaction refers to “means by which users communicate input to the system and the feedback supplied by

the system” (p. 343). Navigation refers to an accessing process rather than a structure whereas interaction refers to all aspects of command-control devices such as finger gestures, keyboards, mice and so on. Finally, appearance refers to all aspects of “visible, acoustic, and haptic languages (e.g., typography or color; music timbre, or cultural accent within a spoken language; and surface texture or resistance to force, as well as the level of abstraction or realism in graphic imagery” (p. 343). All these conceptual components of interfaces are guided by the cultural and linguistic backgrounds of interface designers or the dominant users. All of these components play a crucial role in establishing a relationship between users and interfaces because whether it is the use of a metaphor or a mental model, interfaces are informed either by designers or users. In this way, there is a chance of undermining other cultural groups while designing with the dominant group in mind. Further, the issue of navigation, interaction and appearance may matter to users from diverse cultural and linguistic backgrounds. Navigation refers to a mental model afforded by different tools such as windows, the control panel and so on. Navigation is a process of using an interface instead of a fixed structure. Similarly, interaction is another important component because it refers to whether or not a user from other cultural and linguistic backgrounds has interactive power. Appearance also matters as it informs potential users in their assessment as to whether they are included in its design or not. Current LMS interface design has not facilitated this important component. Even if appearance does not seem to be important, it is one of the most important factors that helps users feel comfortable and at home in an online environment.

Because these different conceptual components of interface matter to the users, interface designs in general and LMS interfaces in the cross-cultural digital contact zone in particular should be re/designed according to the needs of diverse users in the contact zone. Therefore,

Marcus and Gould (2012) argue that interface designers require “an understanding of internationalization, translation, and localization issues within the context of a globalization strategy” in the process of interface design (p. 344). Interface designs should be oriented toward the need of the users since it is a meeting point of writing students from diverse cultural and linguistic backgrounds. It is necessary to pay special attention to cultural dimensions of technology users while designing interfaces because they can “provide insight and help designers adjust UIs (User Interfaces) to better serve users” so that the designers can “achieve more compelling and successful solutions” to their cultural and linguistic differences in online environments (Marcus and Gould, 2012, p. 342). To achieve this, all design efforts demand a profound understanding of intended users, their individual needs and preferences.

### **3.3 INTERFACE AS A CULTURAL AND LINGUISTIC CONTACT ZONE AND BORDER**

Interfaces can be taken as cultural maps that produce or reproduce different cultural norms and values. According to Wood (1992), it is important to identify the cultural information passed along in the maps of computer interface-especially because this information can serve to reproduce the asymmetrical power relations (p. 21). Computer and their interfaces are the mappings and remappings of social and educational systems where the sense of ownership and opportunity of accessing them matter a lot. Selfe and Selfe (1994) also agree with this Wood’s notion of interface.

Besides looking at interfaces from Wood’s (1992) notion of cultural maps laden with certain cultural ideologies, Selfe and Selfe (1994) look at interfaces from Pratt’s (1991) notion of linguistic contact zone as social spaces where cultures meet in highly asymmetrical relations of power. They argue that it is necessary to understand and identify the cultural information passed along in the maps of computer interfaces since they are “sites within which the ideological and

material legacies of racism, sexism, and colonialism are continuously written and re-written along more positive cultural legacies” (p. 484). They argue that primary interfaces “generally serve to reproduce the privileged position of Standard English as the language of choice or default, and, in this way, contribute to the tendency to ignore, or even erase, the cultures of non-English language background speakers in this country” (p. 488). These interfaces constantly “name, marginalize, and define differences as the devalued Other” (Giroux, 1991, p. 33). This particular nature of primary interface and interface design practice excludes users who do not belong to the dominant cultural and linguistic backgrounds. As a result, writing students from marginal backgrounds feel alienated since they must abandon their cultural and other values while entering the cultural and linguistic borderlands of the interface.

The association of interfaces to cultural and linguistic contact zones further associates interfaces with cultural and linguistic borders. Selfe and Selfe (1994) look at interfaces as different types of borders, following Giroux (1991) for whom these borders are cultural formations “historically constructed and socially organized within rules and regulations that limit and enable particular identities, individual capacities, and social forms” (p. 30). According to Selfe and Selfe (1994), interfaces also are non-innocent physical, cultural, and linguistic borders (p. 495). This situation privileges one group of users over other. As a result, those users/students from periphery cultural and linguistic backgrounds lose their agency. In such a case, it is always good to “extend rather than erase the possibility for enabling human agency” (Giroux, 1991, p. 27). Therefore, inviting Citizen Designers to design interfaces of online platforms is invaluable to transform interfaces into inclusive platforms to users from various cultural and linguistic backgrounds. With this, the LMS online platforms also are transformed into democratic platforms that ensure equal say from various users in terms of their design. As a result, interfaces

of online environments do not disable anyone on the basis of culture and language. Further, interfaces should be developed as sites of “multiple and heterogeneous borders where different histories, languages, experiences, and voices intermingle amidst diverse relations of power and privilege” (Giroux, 1991, p. 169). Selfe and Selfe (1994) also argue that the re/design of these interfaces should be to help “rewrite the relationship between the center and the marginalized and oppressed groups represented within the culture and the educational system” (p. 496). This rewriting of the relationship can contribute to the democratization of educational system through the representation of marginalized and oppressed voices.

### **3.4 INTERFACE AS AN ELECTRONIC ENVIRONMENT**

Because this study establishes a relationship between interface design by periphery writing students in the cross-cultural digital contact zone of First-Year Composition classrooms in US universities to their digital writing and research, it is necessary to look at interface from the perspective of electronic environments. Further, to use genre theory perspective in the interface design as well it is necessary to treat interface as electronic environment. Carpenter (2009) goes beyond Selfe and Selfe’s (1994) notion of interface as cultural and linguistic contact zone, and he relates interface with electronic environment. While associating interfaces with electronic environments, he bases his argument on Hall’s (1986) theory of articulation because the theory of articulation helps us understand how ideological elements come under certain conditions to create a discourse. Hall’s (1986) theory of articulation is both “a way of understanding how ideological elements come, under certain conditions, to cohere together within a discourse, and a way of asking how they do or do not become articulated, at specific conjunctures, to certain political subjects” (p. 53). Articulation from this perspective is concerned with how relationships, connections, and unities of ideological forces and social

groups, for example, form, coalesce, operate and dissolve within specific contexts and historical moments. Articulations for Hall are non-necessary relationships even if they seem to be inevitable. Looking from the perspective of articulation theory, interface is a complex association of larger social and ideological forces. Therefore, according to Carpenter (2009), interface represents the larger dynamics, ideologies, and forces that reside unnoticed behind the scene. (p. 142) Interface and genre are related to each other as “[i]f genre is the mechanism by which interactions between activity systems occur, the interface is the space in which these interactions occur, the larger, encompassing context” (Carpenter, 2009, p. 142). The appropriate re/design of interface is invaluable because interface provides contexts for different interactions to occur in a certain context. From this perspective, interface is an infrastructure that makes different interactions possible. Grabill (2003) relates interfaces to dynamic infrastructures that provide ground for interactions. Therefore, he argues that these dynamic infrastructures should not be ignored, otherwise, some key moments “when possibilities and identities are established” are missed (p. 464). He believes that social and cultural issues are inscribed at the deepest level of design of interface, and interface carries the material inscriptions of class (and other) narratives. Therefore, it is necessary to pay attention to how interfaces are designed for writing students and to re/design them to do away with any disabling factors for people from different cultures and languages. Interfaces can become appropriate places for cross-cultural collaborations as well as democratic design practices that help Citizen Designers create new knowledge through their design activities in the form of electronic genres and texts.

Interfaces as electronic environments make interactions between users and systems possible, and ultimately these interactions can be related to new kinds of texts and writings. According to Carpenter (2009), these interactions help to generate new kinds of writing and texts

when they make a connection with the powerful and innovative ways of composing and communicating. With this, there is an evolvement of new genres in a form of interface function in large and hegemonic way because these genres “proliferate and circulate across systems of media and activity because the amorphous, open terrain of electronic environments position them as unique communicative boundary spaces” (Carpenter, 2009, p. 143). According to him, like the genres and texts they generate, these electronic environments function by “instantiating and mediating the actions and interactions of individuals and interrelated/boundary activity systems by means of a seemingly endless variety of tools-in-use” (p. 143). These environments operate in a manner of genre function that stands for social and rhetorical framework within which we perform our everyday practices. From this perspective, interfaces as electronic environments influence users or inhabitants actions and writing practices even if the users/inhabitants shape and reshape them. These electronic environments provide opportunities for the users to acquire their agency. According to Carpenter (2009), these environments allow for and even encourage “active integration and dynamic interaction, resulting in a mixing of genres and literacy practices that does not respect conventional categories, divisions or dichotomies, including the border that separates ... the popular from the academic” (p. 144). This research advocates for a higher degree of interactivity in the LMS interface since the higher degree of interactivity allows the users from diverse cultural and linguistic backgrounds to customize and manipulate interfaces in order to make themselves visible in the contact zone. Further, this higher degree of interactivity in the interface helps them test their new and innovative writing practices.

Further, the notion of interface as electronic environment helps us see the close connection between popular culture and writing in general and digital writing in particular even if popular culture and writing have not been closely aligned historically. It is because the

interface as electronic environment plays a crucial role in the formation of a particular text. Users in electronic environments frequently “encounter similar composing strategies and skills” as in different activity systems, and electronic environments “represent(s) a point of conjuncture, the moment at which different ideas or practices become joined or articulated to other ideas and practices” as in articulation theory (Carpenter, 2009, p 145). From activity system and articulation theory perspectives, interface as electronic environments works as a playground to provide form and structure to each and every formless act. Writing students from peripheral cultural and linguistic backgrounds become articulations in electronic environments in which they shape themselves by shaping dominant education system through their cultural and linguistic activities.

Interface as electronic environment works as a genre-ecology, and this notion of genre-ecology is useful while discussing LMS interface re/design by writing students and its contribution to student writing. Interface as electronic environment is dynamic and helps to shape others and gets shaped itself according to changing contexts. Therefore, Spinuzzi (2009) argues that interfaces should not be taken “as static, indexical metaphors representing physical artifacts, but as ecologies teeming with developing, mutable genres” because these genres have “significance in their own right, take form through their own developmental histories, and address their own sets of activities” (p. 84). According to him, this genre-ecology framework can help writers/designers push beyond the limitations of metaphor through the treatment of genre as interlinked cultural-historical artifacts that reflect the activities involved in the creation of those cultural-historical artifacts. Further, these activities embed contradictions among themselves. He argues that “[t]he genre-ecology framework, then, complicates the acts of critiquing, evaluating, and designing interfaces” (p. 85). According to him, the genre-ecology framework “encourages



us to understand interface elements as complexly interconnected artifacts” (p. 85). Considering interface elements as interconnected artifacts make us aware of our encounters with such practices in which we treat screen genres as simple copies of off-screen genres. Instead, the interface elements as interconnected artifacts stand for hybrid genres with complicated genealogies and reflect multiple activities. The inherent contradictions within genre ecology framework lead to usability issues, and they help us understand the cultural-historical roots of usability issues. These contradictions do not emerge because of poor metaphors, rather, they spring from “deeper contradictions among activities” (Spinuzzi, 2009, p. 85). This particular knowledge of interface as genre ecology helps Citizen Designers understand how writing changes according to the rhetorical strategies involved in their writing.

### **3.5 RHETORICAL FUNCTION OF INTERFACE**

As electronic environments that create favorable contexts for interactions, interfaces are means in themselves. Interfaces are influenced by a group of users who have power to manipulate/customize them, and interfaces also try to influence another group of users who lack customizing opportunity. As a result, interfaces are not equally accessible to technology users from diverse social, cultural and linguistic backgrounds. This act of exercising of power is prevalent with interfaces and their designs that favor some while ignore others. Hence, interfaces are rhetorical, and they should be designed and examined accordingly in new media writing and research. Interactivity on the interface actually is the very nature of New Media as a whole and provides users with “the means to generate, seek, and share content selectively, and to interact with other individuals and groups, on a scale that was impractical with traditional mass media” (Lievrouw and Livingstone, 2006, p. 25). Users remain active in the interface, and they have the power to intervene through manipulating objects. Similarly, the users can convert these actions

into interactions in the new media interface as “new media actively involves and engages the user in using, playing, exploring, experimenting, discovering, and sharing” (Carnegie, 2009, p. 166). There is a possibility of high levels of engagement through high levels of interactivity. Carnegie (2009) argues that “[r]hetorically, higher levels of interactivity and thus involvement produce higher levels of acceptance, making the user more disposed to persuasion” (p. 166). Interactivity is not limited to mere navigation, rather, it is more complex than mere navigation. Carnegie (2009) argues that “[i]nteractivity is created through three modes- multi-directionality, manipulability, and presence” (p. 166). All three modes of interactivity contain strategies and enact models for creating various degrees of interactivity. However, these modes of interactivity do not seem to be taken into consideration in the current new media design and LMS interface design in particular.

Because this research is on inviting Citizen Designers to design digital interfaces in general and LMS interfaces in particular for their higher-level interactivity, it focuses on the manipulability aspect of interactivity. This aspect of manipulability is invaluable for the higher-level interactivity in the information design because interactivity is measured “on the basis of user’s influence or manipulation of the form and content of new media communication” (Carnegie, 2009, p. 168). According to Carnegie (2009), in the mode of manipulability, “the lowest levels of interactivity occur when the user cannot change the form of the interface and cannot create content” whereas in the higher level of interactivity, the user is able to “customize the interface” (p. 168). She also writes that “[i]n new media, the mode of manipulability, as a means for creating interactivity, occurs most often as customization. The interfaces for web-based search engine portals provide an illustration of interactivity based on customization” (p. 168). According to her, users’ ability to change interface color, background images and patterns,

layout grids, and font and search box sizes on any interface is an example of low/limited interactivity. These types of interactivities are predetermined by commercial or political interests of the corporations or organizations who create them, and MyYahoo! is an example of low or limited interactivity. MyYahoo! does not allow its users to change its design besides color patterns. Even if users desire to change design according to their need, they cannot since they are restricted by the corporate interest. MyYahoo! does not provide an opportunity to interact either with other users or with the technology itself. On the other hand, users' ability to create and add content signifies highest level of interactivity, and this makes the users "feel empowered and engaged" (Carnegie, 2009, p. 168). Wikipedia is an example of highest interactivity even if the users are not allowed to change its formal design. However, users are able to change/modify substantially in terms of its content. The users in the Wikipedia interface have a chance of interacting with other users as well as with the technology itself. Wikipedia does not treat users individually, rather, it treats them as important members of the society.

The role of presence is equally important in terms of interactivity since it involves "representing and mapping social and spatial relationships through attributes of the medium and technology to create an experience of social connection and/or being present in a place or space" (Carnegie, 2009, p.171). Current LMS design in general and Blackboard design in particular lack this component of interactivity in the name of creating universal or neutral platform. Any aspect of interactivity with technologies "increases with the degree to which a user experiences presence with others or with a place" (Carnegie, 2009, p. 171).

The rhetorical aspects of interface are similar to the rhetorical concept of exordium, the beginning of anything, as exordium is not there to argue but as a presence that precedes every user's activities in the electronic environment. However, this ever-presence of interface is not of

a natural sort since the shape and design of interface are not a natural and inevitable. The shapes and designs of interface are the designs of human experience, and they stand for locus of power i.e., having power to shape as it is. Exordium refers to prologue or preface, and, in terms of new media writing, exordium refers to an interface element that is always and already there and continuously engages the audience in interaction between audience, technology and its design. Carnegie (2009) argues:

As users experience higher levels of interactivity, they experience higher levels of empowerment: they become senders and creators of message and content. They experience higher levels of control: they choose between options and customize the interface to reflect their tastes, if not interests. They experience higher levels of connection in terms of both social and spatial relationships: they meet, communicate, and build relationships with others, and they explore and encounter new spaces and environments while sitting alone in a single place. Increased interactivity results in increased attentiveness, and increased feelings of empowerment, control, and connection result in increased levels of acceptance. (p. 171)

The modes of interactivity enable user empowerment as well as enact patterns of control. Therefore, it is necessary to look at the rhetorical function of interface “through modes of interactivity to prepare the user/audience to accept particular world views and constructions of relationships, and for this we need to reshape our notion of the exordium and add interactivity into the discourse of rhetoric” (Carnegie, 2009, p. 172). This interactivity function of the interface works as a persuasive element. Selber (2004) also argues that interfaces are persuasive. (p. 147) According to him, interfaces are like captology, the study of computers as persuasive technologies, and focus on systems that attempt to modify attitudes or behaviors in explicit ways.

Interface design helps writing students question established social relations and create new ones through the use of rhetoric in their design process. Wysocki and Jasken (2004) argue that “interfaces are about the relations we construct with each other- how we perceive and try to shape each other- through the artifacts we make for each other” (p. 33). Because of the importance of user engagement in the interface, Wysocki and Jasken prefer engagement to ease in the use of interface. According to them, this sense of ease ignores the possibility of engagement between users and interface. Learning how an interface is designed as well as how it can be redesigned for users’ benefit is far better than making it easy to follow from the perspective of user in a long run. It is also not a difficult thing to achieve since it is possible by asking “students (and ourselves) to redesign, through sketches on paper or on screen, the interfaces we use everyday” (Wysocki and Jasken, 2004, p. 45). Inviting students or ourselves to re/design at least encourages us to use our rhetoric in interface design that contributes a lot to the re/design according to the users and their needs whereas the interactivity nature of interface design helps us understand the rhetorical nature of writing.

The rhetorical aspect of interface design helps writing students in general and peripheral writing students in particular present themselves as powerful rhetors since it includes “persuasion, deliberation, reflection, social action, and an ability to analyze metaphors” (Selber, 2004, p. 182). Similarly, rhetorical aspect of interface helps designers channel “energies along particular axes of interest, delimit experiences, and constitute how meaning can be made” (Kimme-Hea and Turnley, 2010, p. 257). Because design is a powerful tool in itself, it helps interface designers to design interfaces to achieve their design goals.

### **3.6 INTERFACE DESIGN AND ITS CONTRIBUTION TO THE PERIPHERAL WRITING STUDENTS**

Design is basic human activity, and human beings achieve their goals through design activities. Design is a contested notion, and it encompasses contested meanings (Buchanan, 1995; Carpenter, 2009, Carnegie, 2009). According to Julier (2008), design is “a culturally specific practice which is driven entirely by strategies of differentiation” (p. 3). Technology design in general and LMS interface design in particular, therefore, are cultural practices since designers design according to specific cultural and linguistic norms and values with which they are familiar. Interface design for that matter can be a powerful rhetorical tool for the designers.

First of all, design, whether technology in general or LMS interface design in particular, is a rhetorical act because the designer should take audience, context, and purpose of a particular design into account in the process of designing. It demands that the designer identify a problem and solve it through the act of designing. Further, it requires the designer to communicate ideas through different mediums. The act of designing is invaluable in a cross-cultural digital contact zone because it helps to create a digital environment that is inclusive since the act of designing itself is “embedded in the observation of cultural practices” (Wysocki, 2007, p. 67). As a result, the cultural norms and values of the participants are acknowledged when a digital environment is designed in a collaborative way since design also is an interested social action. Kress (1999) treats design as an interested action that is “socially located, culturally and historically formed” whereas designers as the “remakers, the transformers, and the re-shapers of the representational resources available to them” (p. 84). The designers are rhetors because they work with the available resources to remake things through their social interaction. This act of remaking is very powerful because it “on the one hand reflects individual interest, and on the other, due to the social history and the present social location of the individual also reflects broad social-cultural

trends” (Kress, 1999, p. 84). Transformation is the basic characteristic of design that transforms use into remake (Kress, 1999, p. 85). With this transformative characteristic of design, the Citizen Designers in the First-Year Composition classrooms will be able transform LMS into democratic platforms through their interface design activities.

Secondly, design goes beyond rhetoric, and, as a result, designers “add material and so consider how expected (or unexpected) materials support an audience use and understanding of a product” going beyond the usual rhetorical triad- audience, context, and purpose (Kress, 1999, p. 69). This act of going beyond and/or adding to the rhetorical triad can broaden the scope of research since design “has been tied to the development of useful (instead of readable) objects, it tends to foster a more concrete and bodily sense of audience, purpose, and context than rhetorical research often does” (Wysocki, 2007, p. 69). Hence, design encourages students to make careful and thoughtful observations. When technology design is made a part of a writing curriculum and syllabi while teaching writing in a cross-cultural digital contact zone situation, writing students have the ability to question and challenge current design principles, and writing students will design by keeping diverse users in mind so that these LMS online platforms will be inclusive. Most importantly, LMS platforms will provide customizing opportunities to writing students since users badly lack this opportunity in LMS platforms.

Thirdly, design requires the designer to go beyond the level of critique and remake something, doing away with the problems/shortcomings of existing design in general and digital interface in particular. The act of design stands for competent use of semiotic resources, and it “requires the orchestration and remaking of these resources in the service of frameworks and models expressive of the maker’s intentions in shaping the social and cultural environment” (Kress, 1999, p. 87). In the context of interface design of online environments used in the cross-

cultural digital contact zone, it is not enough to critique the existing interface. Rather it is necessary to design in order to make LMS inclusive since “critique looks at the present through the means of past production” whereas “design shapes the future deliberate deployment of representational resources in the designer’s interest” (Kress, 1999, p. 87). Critique is just one part of whole design process. Kress (1999) argues:

Critique leaves the initial definition of the domain analysis to the past, to the past production of those whose processes are to be subjected to critique. It leaves definition of the agenda to those whose purposes are to be the subject of critique, are not mine. The task of the critic is to perform analysis on an agenda of someone else’s construction. As a result a considerable degree of inertia is built into this process. The idea of the intellectual as critic corresponds to social arrangements and of certain historical periods: namely arrangements in which some individuals and groups set the agenda and others either follow or object. Design takes the results of past production as the resource for new shaping and for remaking. Design sets aside past agendas, and treats them and their products as resources in setting an agenda for future aims, and of assembling means and resources for implementing that. The social and political task and effect of the designer is fundamentally different from that of the critic. (p. 87)

Hence, writing students in general and peripheral writing students in particular should re/design interfaces in the cross-cultural digital contact zone as a means to deconstruct cultural and linguistic knowledge passed along those interfaces designs and to create new cultural and linguistic knowledge for social change instead of just critiquing the existing designs.

Fourth, design is the arrangement of existing resources. Lam (2008) argues that “[d]esign involves the orchestration of existing resources- such as linguistic patterns, genres, and



discourses- in potentially transformative ways to achieve the designer's communicative purpose, particularly when the designer's interest is at odds with existing representations of social reality" (p. 1193). According to Lam, the designers can change and renegotiate their social identities through their design activities. Lam's notion of design can be applied to LMS design. In the course of LMS interface re/design for cross-cultural digital contact zone, students question or challenge their social identities or representations and create new identities through their design activities. Sun (2012) argues that technology design "embodies a constellation of design processes, design communication, standards and regulations, manufactured products and deliverables, and production and consumption that aims to transform our lives and surrounding contexts" (p. 19). Technology design is a cultural practice since technology embodies cultural values that shape our lives.

Fifth, design is related to structure and agency. Also, design is a process that keeps an individual and his or her culture intact. Because the notion of design revolves around the notion of meaning and culture, it starts with different sets of assumptions related to meaning whereas it ends with different sets of assumptions of culture. Further, the design focuses on change and transformation instead of focusing on stability and regularity. Cope and Kalantzis (2000) argue that "[i]ndividuals have at their disposal a complex range representational resources, never simply of one culture but of the many cultures in their lived experience; the many layers of their identity and the many dimensions of their being" (p. 204). In the course of making meaning, individuals transform things instead of reproducing them because individuals/designers add something to the available resources through their social interaction. According to Cope and Kalantzis (2000), voice and hybridity are two elements for change and transformation. There is a creation of hybridity in the process of design because there is a possibility of bringing together

“many layers of identity, many aspects of experience, and the many discourses that represent the Available Designs of meaning, are ever being related, combined, and recombined in such a way that all utterances are polymorphous reconstructions” (Cope and Kalantzis, 2000, p. 205) in the process of designing. Most importantly, design helps to create one’s voice in addition to combining those different voices available in the previous design since “[e]very design picks and chooses from all the bits in the world of Available Designs and puts it back together in a way it has never quite been before. In both of these aspects- voice and hybridity- agency is the critical factor” (Cope and Kalantzis, 2000, p. 205). This particular nature of designing interface encourages designers to convince their audience through the available means of persuasion. Writing students enhance their digital writing through their design, and they become successful in making their point across their multimodal composition i.e., through their writing and designing activities.

Next, design is a powerful tool to reach to the target audience or the users of technology because it takes different approaches such as cultural and linguistics to reach the real users. For example, culture specific design focuses “on meeting the needs of a target audience through authentic or true representations” (Young, 2008, p. 330). When writing students from periphery cultural and linguistics backgrounds and experience are invited to design the interface of those digital environments in the cross-cultural digital contact zone, they will be able to create an conducive learning environment because the integration of culture in the design of ICTs has “the potential to improve learning for ethnically diverse learners” (Young, 2008, p. 349). When the interface of those digital environments in the cross-cultural digital contact zone are designed by writing students with peripheral cultural and linguistics experiences/backgrounds, electronic environments help writing students acquire their agency in the cross-cultural digital contact zone.

### **3.7 INTERFACE DESIGN AND PROBLEM SOLVING**

Interface design is also related to problem solving that involves “identifying, defining, and representing the problem (the given state), determining a solution (the goal state), and implementing actions that lead from the problem to the solution” (Carnegie, 2013, p. 36). From this perspective, design ability lies in the ability to resolve ill-defined problems “by adopting a solution-focusing strategy and productive or appositional styles of thinking “(Cross, 1995, p. 110). In design as a problem solving approach, a problem is viewed or acted as though goals, initial conditions or allowable transformations are ill-defined.

Design in general and LMS interface design in particular reveal multiple solutions to a particular problem and value each solution to the problem in terms of cultural and linguistic issues in LMS interface design. In the course of solving a particular problem, it allows “people with a variety of skills and learning abilities to work cooperatively to bring insights and expertise to problems and opportunities in order to better develop new and innovative solutions” (Watzman and Re, 2012, p. 318). Hence, there is a use of multiple perspectives in the solution of a single problem. Similarly, there is also an involvement of different steps in the design related to learning. According to Watzman and Re (2012), first, a need or problem is identified, researched, and defined. Second, a due focus is given to learning of the unknown and assumptions are questioned. Along with it, a wide and broad research is used to locate the information and generate ideas. Third, project content, scope and intent are formally established. Further, initial possibilities are represented and presented as prototypes. Fourth, those prototypes are assessed, tested, and judged as well as knowledge gained is incorporated into further studies and refinements. Finally, a synthesis of initial solutions are made using this process and specifications are released for making multiples to a manufacturer as a process of production (p.

318). Designing technology or LMS interface in the cross-cultural digital contact zone encourages designers take a systematic approach in the interface design process that includes diverse users in the contact zone.

To sum up, this chapter has established the meaning of design, discussed different aspects/dynamics of interface and explored different advantages of LMS interface design in a cross-cultural digital contact zone by composition students in general and periphery writing students in particular. Because it is necessary to make these LMS interface design activities academically and intellectually meaningful and informed by different theoretical perspectives, Chapter 4 will discuss theoretical modalities in order to establish a tight connection between individual design activities, their relationship to a particular social, cultural and linguistic groups in our society, and writing practices. Chapter 4 will discuss activity theory, articulation and genre theories as well as issues related technology design and affordability.

## **Chapter 4: Theoretical Modalities**

### **4.1 USABILITY TEST**

After discussing different dynamics of interface and importance of design as a part of writing curriculum in Chapter three, it is now time to introduce and discuss major theoretical modalities related to Citizen Designers and their interface design activities. Besides using the notion of contact zones to visualize cross-cultural tensions and usability tests to understand how the writing students from periphery cultural and linguistic backgrounds perceive LMS interfaces such as Blackboard, I use activity, articulation, and genre theories as well as a theory of social/technological affordability to analyze student interface designs in the cross-cultural digital contact zone situation of FYC.

Prior to analyzing student interface designs, I conducted an empirical study with Citizen Designers because empirical investigations help us understand how cross-cultural negotiations occur as well as how we “can improve and subsequently implement those cross-cultural encounters into our classrooms to make the idea of designing for a diverse population very real” (Hilligos and Williams, 2007, p. 246). At this level, I conducted a usability test in order to assess Citizen Designers’ experience with the existing Blackboard System interface in the cross-cultural digital contact zone situation of writing classrooms at the University of Texas at El Paso (UTEP). I use the usability testing method because designing and performing a usability test “help[s] [me] engage students in the evaluation process” since the planning of a usability test requires “systematically analyzing the audience’s knowledge and goals” (Swan and Slattery, 2009, p. 193). It is also useful for me because it treats writing as a technology system with which writing students interact as users. This act of constructing students as users allows me “to see them not as subordinate to the learning process, but as engaged participants in the technological system that

is bounded by the institutions, departments, and physical spaces in which learning activities take place” (Eyman, 2009, p. 222). Overall, usability as a research method is invaluable for studying writing practices since it is “always coupled with design” (Eyman, 2009, p. 224). Further, the usability test from cultural and linguistic perspectives helps me assess the cultural and linguistic conflicts and user experiences in the digital contact zone. Being motivated by cross-cultural technology design, usability testing is focused on action and meaning-making aspects of the online environment and helps to see how the cultural hegemony/ideology comes into play in technology design. Because my research analyzes Citizen Designers’ interface design activities after assessing how Citizen Designers perceive LMS interfaces, I use different theories at this level: I use activity theory to analyze individual design activities; I use articulation theory to analyze/discuss how those Citizen Designer activities are guided by cultural and linguistic groups they belong to; I use genre theory to create a connection between activity theory and articulation; and I use the theory of social/cultural affordability to analyze how their familiarity with social/cultural/technological knowledge facilitates/obstructs their technology use and design.

## **4.2 ACTIVITY THEORY**

Since my research looks at the Web interface design by Citizen Designers in the cross-cultural digital contact zone situation of First-Year Writing classrooms, activity theory helps me as an approach in the analysis of cross-cultural technology design since it takes an interdisciplinary approach in the analysis. In Chapter six I analyze web interface design by composition students using activity theory because it is a “powerful and clarifying descriptive tool rather than a strongly predictive theory” (Nardi, 1996a, p. 7). Activity theory helps to understand the unit of consciousness activity because it values an individual based on that

individual's conscious activity since an individual's conscious activity is "firmly and inextricably embedded in the social matrix of which every person is an organic part" (Nardi, 1996a, p. 7). This social matrix in which an individual is related to a group as a whole is composed of people and artifacts people produce/design. Activity theory helps me understand the lived experience of Citizen Designers and their design activities. According to Spinuzzi (2003), activity theory is a methodological foundation for the study of lived experience and a methodology is "the theory, philosophy, heuristics, aims, and values that underlie, motivate, and guide the method[s]" (p. 7). I treat Citizen Designers' interface design as an artifact since it plays a vital role in the understanding of an activity. Activity theory helps to "define the integrated framework" that places "concrete use activities on center stage in cross-cultural design, different from other design methodologies" (Sun, 2012, p. 57). Activity theory helps me analyze Citizen Designer concrete design activities in their website designs.

Further, activity theory is invaluable for this study because it assumes that the designing of the Web interface by students from peripheral cultural and linguistic background helps them acquire their agency and enhance their digital writing and research. User interface design is a complicated act, however, the recent act of involving users has certainly contributed to interactive design for user empowerment. For example open access web design tools such as Webs.com, Weebly.com and Wordpress allow designers to customize the user interface. Instead of designing users interfaces without participating them, it is necessary to involve users in the "design process itself" (Kuutti 1996, p. 22) since it is impossible for users to understand and analyze user interface design activities without understanding interface design contexts. This unit is called an activity. These human activities are dynamic and change according to changing context. Every activity has its history of its own, and it has various artifacts that perform a

mediating role. Sun (2012) argues that “[a]s a cultural-historical approach, activity theory claims that people’s activities are an object-oriented and tool-mediated process in which actions are mediated through the use of artifacts (including tools and languages) to achieve a transformative objective” (p. 57). This object-oriented and tool-mediated component of activity theory becomes useful for me to interpret Citizen Designers’ interface designs in the cross-cultural digital contact zone.

Activity theory is further useful for the analysis of interface design activities by Citizen Designers in the cross-cultural digital contact zone for two reasons. First, it treats an activity in general and design activity in particular as a unit of analysis for the study of human activity. Second, the notion of tool mediation in activity theory treats contexts as objects of inquiry. In the minimal meaningful context of activity theory, the unified framework of history, development, meanings, community, rules, and even culture take context consideration as “an inherent feature of activity-theory-based HCI design and research” (Sun, 2012, p. 59). Activity theory proposes the activity itself as a context that is constituted through the enactment of an activity that comprises people and artifacts, and it treats their relationship as transformative. The context consists of object, actions, and operation. Sun (2012) argues that this inherent consideration of context in an activity unit “allows for a design model built on activity theory to include culture and history from the beginning” (p. 59) that helps to avoid design problems in traditional cognitive model that omits cultural and contextual factors.

Similarly, different structures of activity theory make it possible to analyze contextual factors associated with the instrument or social aspect of activity. Sun (2012) notes that a concrete activity is always motivated by “general objectives acknowledged and recognized in the local community and in the sociocultural context” as well as it is composed of “a sequence of



*actions*, which are goal-directed in an immediate context (e.g., at the workplace or at home) and are usually conscious” (p. 60). These actions are very similar to the tasks in the interface design, and can be realized in a use situation whereas outcomes can be achieved through operations that usually non-conscious routine processes and automatically performed.

In this study, interfaces and their designs are taken as artifacts. Artifacts can be both physical tools or sign systems such as human language. Kuutti (1996) argues that “[a]rtifacts themselves have been created and transformed during the development of the activity itself and carry with them a particular culture- a historical residue of that development” (p. 27). Artifacts cannot/should not be treated as something that is given since they are dynamic in nature and carry social, historical, and cultural nuances with them as they are produced. Activity theory offers “a set of perspectives on human activity and a set of concepts for describing that activity” (Nardi, 1996a, p. 8), and it also proposes “a strong notion of *mediation*- all human experience is shaped by the tools and sign systems we use” (Nardi, 1996a, p. 10). Activity theory’s focus on the tool or artifact helps me see technology as an object used to perform activities in a particular context. The tool or artifact represents a materialized activity that has been created and transformed during the development of the activity itself. As a result, it carries with it “a particular culture- a historical residue of that development” (Kuutti, 1996, p. 26). That is why the activity theorists relate the importance of an artifact to cultural revolution to a gene’s importance to biological evolution (Engestrom, 1999). Activity theory helps me analyze Citizen Designers’ interface design as their personal and cultural experiences and their linguistic systems mediated by the interface design itself. This notion of tool mediation plays a great role in understanding Citizen Designer perceptions toward current LMS interface designs and Citizen Designer design activities.

Activity theory also helps me to see how designer consciousness and sign systems are mediated by tools in Citizen Designer interface designs. Designer consciousness is useful for study of the depiction of human activity since it unifies attention, intention, memory, reasoning, and speech. The notion of consciousness is instrumental in the study of transparent, user-supportive and unobtrusive natures of interfaces. Similarly, the notion of affordance is closely related to this notion of consciousness. Nardi (1996a) writes that “[t]he notion of agents suggests that the user direct conscious awareness toward the user interface rather than that the user interface disappear ‘transparently.’ In a direct manipulation of interface, on the other hand, cognitive content concerns the nitty-gritty of one’s task, with the interface ideally fading from awareness” (p. 13). Nardi argues that activity theory incorporates strong notions of intentionality, history, mediation, collaboration and development in constructing consciousness. Mediation is a key idea of activity theory because our everyday phenomenological lived experience is mediated by our use of tools and symbol systems.

The idea of mediation in activity theory is invaluable because it helps me understand human activity, human experience and use of artifacts in a complete way. Mediation, according to activity theory, refers to human activity mediated by either external or internal tools (Kaptelinin, 1996a), and the instrumental mediation and communicative mediation of human action shape our experience (Nardi, 1996b). The external tool refers to physical tool whereas internal refers to concept or heuristic. Seen this way, mediation integrates individual mind and culture in the society (Engestrom, 1999). Additionally, mediation also refers to the control of our activity through artifacts from outside (Vygotsky cited in Engestrom, 1999). It indicates that the uses of artifacts are socially, culturally, and historically influenced.

Further, mediation is the process of internalization- externalization in which human activity is mediated by a number of internal and external tools. The notion of tool mediation in activity theory helps to explore cultural knowledge since it is a way of transmitting cultural knowledge. According to Kaptelinin (1996a), “[t]ools and culturally developed ways of using tools shape the external activity of individuals and through the process of internalization influence the nature of mental process (internal activity). The role of tools is not limited to transmission of operational aspects of human interaction with the world” (p. 53). Tools perform different activities including shaping the goals of tool users. Kaptelinin (1996a) argues that “[t]he goals achieved by people equipped with a tool are often influenced by the “tool’s goal,” and the final results differ from both goals, being a compromise between them” (p. 53). It is necessary to understand how artifacts mediate the activity within the cultural context in which the activity is situated in order to understand an activity fully. According to Vygotsky, this mediation is a process underlying both phylogenetic development where culture is seen as the highest form of development.

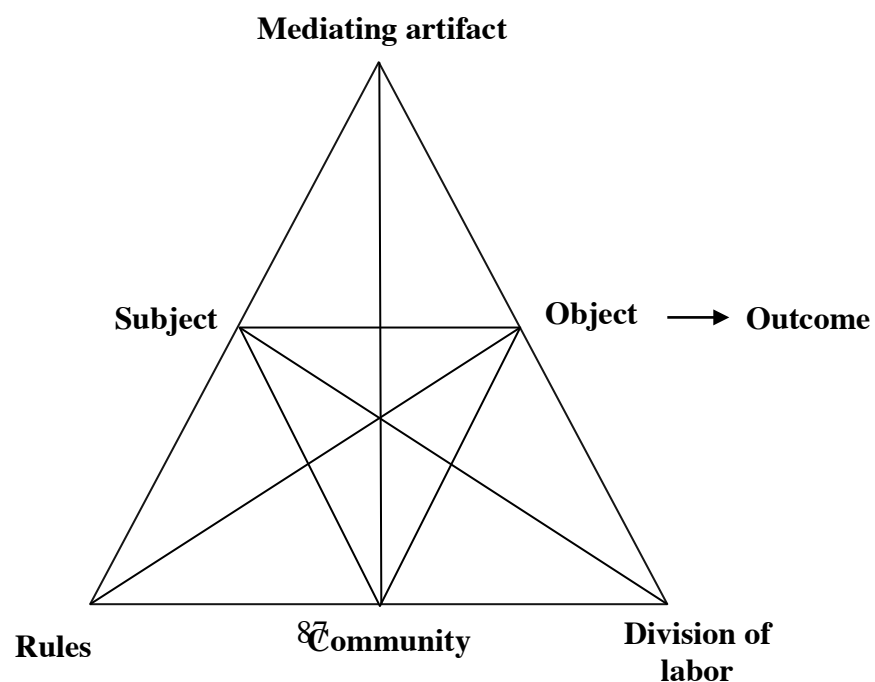


Figure 4.1 Example of Activity Theory.

According to Kaptelinin (1996b), the introduction of new artifacts into an activity affects “the existing social processes of the community in which the activity takes place, and the mental processes of the individuals performing the activity” (p. 125). Similarly, it will also affect the way a new artifact is used. Kuutti (1996) writes “[t]he relationship between subject and object is mediated by tools, the relationship between subject and community is mediated by rules, and the relationship between object and community is mediated by the division of labor” (pp. 27-28). According to him, “tool” refers to anything used in the process of transformation; “rules” refer to norms both explicit and implicit; and, “division of labor” refers to organizations in the society related to the transformation process of the object into the outcome. As we see in Figure 4.1, these notions are historically formed and open to further development (p. 28). The recognition of actors, mediation, historicity, constructivity, and dynamics are some of the features of activity theory among many others. This act of recognizing actors, mediation, historicity, constructivity and dynamics helps me recognize Citizen Designers, their act of mediating their social and cultural experiences as well as their sign systems mediated by their design activities, and the historicity of their design activities help me treat Citizen Designers and their design activities as historically distinct beings and activities in the cross-cultural digital contact zone of FYC classrooms.

Most importantly, activity theory works as an instrument for designing educational technology to effect educational reform through its emphasis on activity. It also helps me understand that technology cannot be designed without taking into consideration community, its rules, and the divisions of labor. Kaptelinin (1996b) also argues that “[i]n order to effect change,

systems of artifacts must be designed that address the needs of all the participants in the situation and help them all move toward roles and ways of thinking appropriate for an alternative approach to education” (p. 143). Kaptelinin (1996b) argues that “[a]ctivity theory can be used to develop a representational framework that will help designers to capture current practice and build predictive models of activity dynamics. Such conceptual tools would enable designers to achieve appropriate design solutions, especially during the early phase of design” (p. 113). Therefore, activity theory is a useful tool to understand the relationship between technology and education since technological innovation is taken as a part of cultural innovation in which artifacts mediate human activity (Leont’ev 1978). This knowledge can be immensely useful for WPAs and writing instructors in the cross-cultural contact digital contact zone situation because it can work as a guiding factor for positive social and educational change.

Despite its placing actual practices on the center stage, its treatment of action and meaning as inseparable, its robust framework for the study of contextual factors on an activity basis, and making us aware of complexities and fluidity of activities in context, activity theory also has some limitations. It is useful for the interpretation of tool-mediated production, but it is inadequate for the analysis of sign-mediated communication (Engestrom, 1999; Spinuzzi, 1999b). Even if activity theory originates with the individual consciousness, these individual consciousness are later mapped to a set of models that emphasize groups, communities, organizations, and institutions. As a result, contextual factors within an activity network are “primarily immediate and do not attend to subjectivity or broader sociocultural factors” (Sun, 2012, p. 61). Similarly, contextual view, according to McCarthy & Wright (2004), has “system without experience” (p. 45). It does not capture “richness and messiness of experience,” (McCarthy & Wright, 2004, p. 46), rather, it only captures some of the rational understandings of

human interaction with the world. Activity theory cannot completely substitute for an anthropology that defines and understands culture. The tool mediation perspective, the most important contribution of activity theory, can also “impose some limitations on its potential application” (Kaptelinin, 1996a, p. 64). Another limitation is that activity theory fails to give us the complete picture of contextual factors. Compared to Vygotsky’s (1978) cultural-historical approach, it adopts a narrower point of view of culture. With Vygotsky (1978), activity theory oriented to practical social needs, greatly influenced by the example of natural science, and interpreted reality from formal schemes. Kaptelinin (1996a) argues that “[w]hile culture, values, motivation, emotions, human personality, and personal meanings are embraced by the conceptual system of activity theory, the theory does not aim at giving a comprehensive description of all these phenomena” (p. 64). To overcome this limitation of activity theory, I bring cultural studies with a special focus on articulation and genre theory into the course of my analysis of citizen designer interface activities in the cross-cultural digital contact zone situation of FYC classrooms.

### **4.3 ARTICULATION THEORY**

Because activity theory does not help interpret the role of sign-mediated communication and larger contextual factors in Citizen Designer interface design in the cross-cultural digital contact zone of FYC classrooms, I draw upon articulation theory for the interpretation of Citizen Designer interface design since sign-mediated communication and larger cultural contexts come into play in their design process. Sun (2012) believes that activity theory and the circuit of culture “complement activity theory by bringing signifying practices and a developmental perspective into the articulation of local user experience as cultural consumption in a globalization age” (p. 62). I use articulation theory from the standpoint of activity theory because

an interface might be productively viewed as the complex associations and links that “extend beyond or beneath the present boundary relationship(s), often to larger social and ideological forces” (Carpenter, 2009, p. 143). Articulation is important for this study because it assumes that technology and culture are not different entities. Articulation deals with how the relationship between culture and technology plays a great role in the study of interface design by Citizen Designers since their use of digital technology and their design are directly affected by their cultural and linguistic backgrounds.

Articulation theory is an integral part of British Cultural Studies, and it has been popularized by Slack (1989), Slack, Miller, & Doak (1993) and Slack (1996) whereas the circuit of power, an important application of articulation theory, has been popularized by du Gay et al. (1997) and Hall (1997). Articulation is related to politics since the broader sociocultural factors informed by British Cultural Studies are “neither aesthetic nor humanist in emphasis but instead political” (Fiske, 1987, p. 284). In an interview with Chen (1995), Hall argues that “cultural studies is always about the articulation between culture and power” (p. 395). For Hall, the political bent is set against the backdrop of the globalization from the beginning. According to Hall, British Cultural Studies with a search for ‘Britishness’ inside British society, but it was later found that “the question of ‘Britishness’ can only even be framed in relation to its ‘others’ with the global cultural systems” (p. 399). Further, British Cultural Studies is concerned with the generation and circulation of meaning. British Cultural Studies’ emphasis on popular culture and daily life practices help us “understand technology use in everyday life and the influence of consumer culture on IT product design and use” (Sun, 2012, p. 62). This notion of relation in terms of others is crucial in the analysis of Citizen Designers interface design.

Articulation helps the analysis of interface design by Citizen Designers since its main focus lies on the relationship between different entities including culture and technology in a particular context. In an interview with Grossberg (1986), Hall argues that an articulation is “the form of the connection that can make a unity of two different elements, under certain condition. It is a linkage which is not necessary, determined, absolute and essential for all time” (p. 53). According to Hall, the theory of articulation is “both a way of understanding how ideological elements come, under certain conditions, to cohere together within a discourse, and a way of asking how they do or do not become articulated, at specific conjunctures, to certain political subjects” (p. 53). In his view, articulation both asks how an ideology discovers its subject and enables us to think how an ideology empowers people without reducing those forms of intelligibility to their socio-economic or class location or social position (p. 53). Since articulation is concerned with ideology and power relations, it helps us understand the interaction between local and global that “positions a local design as a part of the globalization process with the implication of power struggle behind technology discourse” (Sun, 2012, p. 65). Articulation makes the cross-cultural design community aware of this local and global interaction and enables it to make accountable design decisions. This interaction between local and global helps me explore design practices between center and periphery.

Use of articulation in the analysis of interface design by Citizen Designers plays a crucial role in this study because articulation is best known as a methodological face of a radically contextualist theory of cultural studies, and it describes a non-linear expansive practice of drawing maps of connections that have differing forces in particular contexts that must be measured. It helps me understand “the possibilities for remaking contexts through cultural alliances and apparatuses” since articulation is useful to “construct political and contextual



theories of the relations between cultural alliances and contexts, as the milieus of the human relations of power” (Grossberg, 2009, p. 37). It helps me explore how contexts are made, unmade, and remade through interface design practices.

Most importantly, articulation theory provides a new perspective in exploring the relationship between culture and technology Citizen Designer interface designs. From the perspective of articulation theory, culture is articulations that are contingent, not necessary. According to Slack and Wise (2005), articulation can be understood “*as the contingent connection of different elements that, when connected in a particular way, form a specific unity*” (p. 127 emphasis in the original). From this perspective, culture can be understood as a movement and flow of relationships within which things are created and animated. Articulations are dynamic, and, therefore, can and do change over time. Slack and Wise (2005) argue that “one of the insights of articulation is that context, or culture, is not something “out there” out of which technology emerges or into which it is put,” rather particular articulations “that constitute a technology *are* its context” (p. 129). Sun (2012) also thinks that articulation “looks at nonfixed, nonnecessary relations among practices, representations, experiences, affects, and material objects” (p. 62). She illustrates it with an example of a train. According to her, “the unity of a train in a certain culture articulates an engine, cars, railway, passengers, a method of travel, the state policy of transportation, and so on. Articulation is an ongoing process. Some articulations are tenacious and are difficult (p. 62) to disarticulate. For example, a disarticulation of the engine from the train would make the train lose its entity, but the disarticulation between the train and local transportation policy would not change the entity of the train” (p. 63). Articulation refers to how people make meaning with the association of sign systems in their culture and cultural practices. According to Slack (1996), articulation as a methodology maps the context “not in the

sense of situating a phenomenon in *a context*, but in mapping a context, mapping the very identity that brings the context into focus” (p. 125, emphasis in the original). Identities, practices, and effects are the elements of a context where they function as practices. For Sun (2012), this nonreductionist or holistic view of context is “a process of creating connections between various contextual elements (including both conceptual and material things) and between practices and meanings. According to Grossberg (1992), “[a]rticulation links this practice to that effect, this text to that meaning, this meaning to that reality, this experience to those politics. And these links are themselves articulated into larger structures, etc.” (p. 54). This particular articulation emphasizes politics, meaning-making and larger contextual factors helps me explore the gaps left by activity theory in the analysis of interface designs by Citizen Designers since articulation is a relationship among different entities in an activity system itself.

Yet another equally important aspect of articulation theory in the analysis of interface design is its focus on technological design practices and representations that has to play a crucial role in the cross-cultural digital contact zone. Slack and Wise (2005) argue that “[t]echnology as articulation draws attention to the practices, representations, experiences, and affects that constitute technology. Technology as assemblage adds to this understanding by drawing attention to *the ways that these practices, representations, experiences, and affects articulate to take a particular dynamic form*” (p. 129, emphasis in the original). Drawing on Deleuze and Guattari’s (1987) notion of assemblage, Slack and Wise (2005) argue that “*an assemblage is a particular constellation of articulations that selects, draws together, stakes out and envelops a territory that exhibits some tenacity and effectivity*” (p. 129, emphasis in the original). From this perspective, a technological assemblage selects, draws together, stakes out, and envelops a territory that includes the bodies of machines and structures. Besides bodies of machines and

structures, technological assemblage also includes a range of another kind of bodies, bodies of knowledge, actions, passions, practices, commitments, feelings, beliefs, affects and so on in it. Hence, technological assemblage cannot be treated as a simple accumulation of articulations on top of one another, rather, it should be treated as a particular concrete constellation of articulations that assemble a territory that exhibits tenacity and effectivity (Slack and Wise, 2005, p. 130). Assemblages are dynamic and are “characterized by a constant process of transformation: of what Deleuze and Guattari call deterritorialization and reterritorialization” (Slack and Wise, 2005, p. 132). Here deterritorialization describes the process by which some articulations are disarticulated, disconnected, and unhinged whereas reterritorialization describes the process by which new articulations are forged, thus constituting a new assemblage or territory. Slack and Wise (2005) argue that “[t]he transformational process is virtually guaranteed by the myriad articulations that are subject to change. Sometimes rearticulations can contribute to reterritorializing an assemblage in significant ways. Sometimes the differences are effectively inconsequential” (p. 132). Assemblage constitutes singularities and traits from articulations without reducing complex connections of a network or a structure.

Similarly, articulation and its notion of assemblage helps further analyze LMS interface designs and their unequal distribution of agency and power to its users in the cross-cultural digital contact zone situation. Further, this knowledge can be equally important in exploring how Citizen Designers deconstruct this unequal distribution of agency and power when they themselves design interfaces. According to Slack and Wise (2005), the articulation view of assemblage recognizes the unequal distribution of agency and power in networks through the tenacity of the connection. Agency and articulation are integrated in this connection where the identity is the identity that comes from the contingent articulations. According to Sun (2012), the

articulation model explores contextual factors from a discursive angle more robustly, highlights the mediation of meanings on the social aspect of human action- which activity theory does not- and offers another through which to analyze the structure of the content” (p. 64). For her, the circuit of culture is an example of such assemblage, and it “examines five key processes in the development cycle of an artifact: (1) how the artifact is represented, (2) what social identities are associated with it, (3) how it is produced, (4) how it is consumed, (5) and what mechanisms regulate the distribution and use” (Sun, 2012, p. 64). These five elements overlap and intertwine in complex and contingent ways in the everyday real world. Sun (2012) thinks that the whole circuit of culture is needed to examine a cultural artifact completely since circuit of culture illustrates how meanings are mediated by an artifact. This knowledge of circuit of culture plays a crucial role in the analysis of interface design by citizen designers.

Furthermore, the cultural circuit aspect of articulation helps me understand how Citizen Designers tend to appropriate technology according to their cultural and linguistic norms and values in the process of interface design. The cultural circuit view regards technology use as cultural consumption, which happens when a user “consumes a technology for his or her lifestyle and transforms a material user experience into a subjective and symbolic one” (Sun, 2012, p. 64). According to Sun (2012), the circuit of culture view links the instrumental aspect of the mere use process to the subjective user experience situated in a particular cultural context. Most importantly, through this view technology design can show how the issues of representation, identity, production, and regulation interact with and contribute to the “consumption” elements in the whole life cycle (Churchill & Wakeford, 2001). Similarly, subjective user experience acquires more attention in this circuit of culture view when it is related to the issues of identity and representation than from activity theory because it explores broad cultural patterns in a use

context. Citizen Designers' act of appropriating web technology in order to fit their cultural and linguistic norms and values play a crucial role in advocating for the invitation of citizen designers in the process of LMS interfaces in the cross-cultural contact zone.

Overall, the application of articulation theory to study cross-cultural technology design helps me see the design practice as a process of articulation, disarticulation, and re-articulation. According to Sun (2012), a technical artifact with certain design features is “an assemblage of articulations between user goals and tasks, between technical functions and cultural meanings, between work efficiency and lifestyle choice, between design and production, between designer's culture and user's culture, and so on” (p. 65). This particular aspect of articulation helps me argue against the notion of neutral and universal design of technology that acknowledges one particular culture and language imposing its ideology in a very subtle form. Further, it helps me advocate for the invitation of Citizen Designers to the LMS interface design process since culture and technology are firmly related to each other and technology use, meaning making process, technology design and production are all guided by the cultural and linguistic backgrounds of users as well as designers of technology. Most importantly, the notion of articulations encourages me to invite Citizen Designers to design LMS interface design in a cross-cultural contact zone situation of writing classrooms.

Because my study explores the relationship between technology design in general and LMS interface design by Citizen Designers in particular and its relationship to student agency and its contribution to their writing, articulation theory does not help establish the relationship between interface design student writings as it has also its limitations like activity theory. Therefore, I bring the notion of genre theory to bridge gaps between activity and articulation

theories as they tend to emphasize two extremes such as individual conscious activities and the meaning-making process in a larger context.

#### **4.4 GENRE THEORY**

The use of genre theory as a mediator between activity theory and articulation in the analysis of interface design by Citizen Designers helps me explore the socio-historical context, individual design behaviors and writing practices associated with design activities in an online environment. Genre theory helps me understand technology better in a social and historical context. For this purpose, genres should not be necessarily textual ones, as Brown and Duguid (1994) suggest, rather, any designed communicative artifacts should be interpreted as genres (p. 10). According to them, genres are “socially constructed interpretive conventions” that connect designers who “try to recognize what has been invoked, what conventions are in play so that they might respond appropriately” (p. 10). This expanded view of genre plays a crucial role in the process of analyzing interface design and its relationship to student writing.

Because of the meaning-laden format of genre, genre theory can provide a foundation for interpreting Citizen Designer activities from social and cultural perspectives. For Miller (1994), genres are social actions in response to recurrent situations with social motives, and “[s]ocial motives means not a motive about the social or a motive shared by the group but a motive that is socially recognized and allowed for” (Dias, Freedman, Medway, & Pare, 1999, p. 20). A technology user’s cultural affinity and knowledge makes the genre approach in interpreting interface design meaningful and successful since the social motives in genre are bound by cultural contexts. This cultural context can be related to local purpose in the case of global phenomena since it works as “a filter for the most effective communication out of the options suitable for the same social motive” (Sun, 2012, p. 67). The tension between local and global

phenomena helps explore the tension in the design of LMS interfaces in the cross-cultural contact zone situation of FYC classrooms.

Activity theory illuminates the mediation of action during interface design by Citizen Designers and articulation theory examines the mediation of meaning, genre theory links the two mediation processes together. For this, genre theory explores how action is solidified in meaning-carrying generic features through a structuration process with its enlightening view of non-literary genres. Genre theory is useful in this act since genre itself is a “patterning of communication created by a combination of the individual (cognitive), social, and technical forces implicit in a recurring communicative situation,” and genre structures communicate by “creating shared expectations about the form and content of the interaction, thus easing the burden of production and interpretation” (Erickson, 1999, pp. 2-3). Further, genres are classified by the textual features that they serve and in an interaction between functions and texts. Awareness of genres has been very useful in academic research because generic features represent social practices, and genre knowledge helps me explore individual design activities, their meanings, and their relationship to writing process.

Genre theories are invaluable in establishing a relationship between individual design activities and their significances in large cultural and linguistic contexts. Individual motives in the form of cultural and linguistic purposes, or individual design motives, are similar to objectives on the activity level in activity theory. From this perspective, genre theory is similar to activity theory since genres are specific human activities and performances of recognized social motives. Genres are motivated by purpose. Their emphasis on function directs our attention to tasks and actions. As a result, design tasks and actions and meaning creation in cross-cultural digital contact zone are blended together. From this perspective, “genre theory reflects activity

theory in that technology use is socially and culturally formed, and thus generic features of a technology carry meanings and enhance culturally situated actions and local practices” (Sun, 2012, p. 68). In this way, genre theory comes as a mediator between activity theory and articulation in the analysis of individual interface design in the contact zone.

Further, genre is both a behavioral as well as structural construct, and this particular fusion of action and meaning is “instantiated through a structuration process” (Sun, 2012, p. 68). Miller (1994) from Giddens’s structuration theory suggests that genres are capable of reproducing social structures with their recurrent nature in situated communication. Genres are produced, reproduced, and modified by individuals through a process of structuring within organizational contexts (Yates & Orlikowski, 1992). Giddens’s view of structure is virtual (Orlikowski, 2000, p. 406). According to Orlikowski (2000), social structures are emergent from those genres as a result of being “instantiated in recurrent social practices” (p. 406). According to him, this recursive interaction with a technology “produces and reproduces a particular structure of technology use” enacting an emergent structure of technology use (p. 409). He calls this process a technology enactment and regards enactment as a situated and recursive process of constitution that both constraints and enables. This notion of a genre as situated and recursive process that both constrains and enables helps to reinstate the importance of technology design in general and LMS interface design according to the users.

This process of genre enactment as constituting structures is the process of articulation from the British cultural studies perspective. Sun (2012), borrowing Schryer’s (1994) characterization of genre as ‘stabilized-for-now’, describes a genre as a “stabilized assemblage of articulations, for the time being, in an ongoing process of structuration” (p. 69). Genres as behavioral and structural help me reconcile the difference between activity theory and



articulation theory in mapping the context since their focuses are different. For example, activity theory positions contextual factors squarely in a schematic triangle of activity whereas the articulation theory treats context as a movement and flow of relationship with hierarchical structure or center. Spinuzzi (2008) believes that genre as “stability-with-flexibility” could help “frame the stability/instability dialogue more productively” (p. 3). Genre as stability/instability helps the design community to do away with the essentialist position brought by the cultural dimensions model in cross-cultural design. A genre lens helps me explore further how cultural patterns represent particular communicative situations and activities for a given task would evolve as situations change.

#### **4.5 THEORIES OF AFFORDANCES**

Because technology design in general and LMS interface design in particular are related to the whole network of Human Computer Interaction (HCI), it is necessary to discuss on designing technology according to the cognitive abilities of users, and three HCI principles namely understanding perceived affordance, developing efficient navigational designs, and designing effective information organization come into play. Norman (1988) introduced *perceived affordances* as an extension of earlier work by Gibson (1977) who introduced affordance to refer to the set of potential actions held by a physical object. Perceived affordance of an interface refers to the user knowledge about user interaction with interface through user sensory experience. Rosinski and Squire (2009) write that “[p]erceived affordances of an object, therefore, are subject to each user’s ability to sense, as well as to their experiences, their backgrounds, their memories, etc.” (p. 155). Perceived affordance is a way to observe how an object will behave. This notion of affordance is useful when I argue whether LMS interfaces are designed representing users from various social, cultural and linguistic backgrounds.

The notion of perceived affordance has an important role to play in the LMS interface design since the cultural and textual conventions and constraints notion of perceived affordance closely “corresponds to the concept of designing for user expectations in composition” (Rosinski & Squire, 2009, p. 156). Both HCI and composition give utmost importance on inviting users for the active participation with the text or interface, and they take user experience, background, memory into account for the effective interaction of text or interface. The knowledge of the HCI perspective on perceived affordance can encourage students to see mutual relationships between written texts and interface.

Because interface can both afford meaningful activities and provide clues to the users in the cross-cultural contact zone, interface should be able to “facilitate communication between the technology and users for smooth and fluent interaction” (Sun, 2012, p. 71). But because of interfaces designed for lower-level tasks, cultural norms and values students bring in the contact zone are not taken into consideration in the interface design. This problem, Sun (2012) argues, “becomes much worse in cross-cultural design because meaning is a central issue, but users and designers do not share the same cultural contexts, making communication less transparent. Therefore, how to enhance a technology to successfully mediate both action and meaning becomes a fundamental issue in design” (p. 71). In this situation, the notion of affordance can play a crucial role because it can describe possible action made possible by an artifact in use and associate the artifact with practices. Gibson (1979) asserts that an affordance is “equally a fact of the environment and a fact of behavior. It is both physical and psychical, yet neither. An affordance points both ways, to the environment, and to the observer” (p. 129). Even if for Gibson it was regarded to be emerging from the context of material encounters between actors and objects, it is more of a three-way relationship between the environment, the organism, and an

activity (Dourish, 2001, Baerntsen & Trettvik, 2002). For Costall (1995), Gibson's theory of affordances "attempts to put meaning back into the world, first by relating meaning to action, and then by addressing the neglected dualism of agent and world" (p. 468). Therefore, affordance is a relationship mapped "within a frame of being and acting" (Dourish, 2001, p. 118). Norman (1988) defines affordances as "the perceived and actual that determine just how the thing could possibly be used" (p. 9). Even if Norman thinks that affordance cannot be applied to all HCI designs since it is limited to physical affordances only, the notion of affordance helps designers describe the features and functionalities of the artifact they are working on as well to examine both implicit and explicit cues their designers provide to users with artifacts.

#### **4.5.1 Affordances as dialogic relations**

Since this study is based, at least in part on activity theory, I look at the notion of affordance from the perspective of activity theory and articulation. As a result, affordance is related to the notion of a dialogical affordance. From this perspective, affordances are not "properties of objects in isolation, but of objects related to subjects in (possible) activities" (Barensten & Trettvik, 2002, p. 59). Their cultural-historical angle to approach affordances distinguishes between two types of affordances that "originate from adaptation of (objects in) the environment to suit the satisfaction of human needs, and are nested in cultural-historical *forms of societal praxis*" (p. 57, emphasis in the original) and those that are "produced intentionally and are specifically designed for inclusion in cultural-historical forms of practice. The cultural-historical artifacts and forms of practice are artificial habitats." In simpler terms, affordances emerge "as activity-relationship between actors and objects" (p. 59). They theorize affordance in a more sociocultural context. From this perspective, the study is concentrated on interaction lately, and the user-centered digital interface design also demands it. As a result, affordances are

realized “not only by the artifact in use, but also by other parts in a technological system” (Sun, 2012, p. 74). In this, dialogical affordance emerges from the artifact, user and activity. Sun (2012) writes:

According to genre theory, a rule-tool relationship surfaces from the structuration process when structuring forces and social habits (i.e., rules) are clustered and instantiated in a technological genre (i.e., tools), then are solidified as generic features. A genre view of technological artifacts is essential to technology affordances because it helps interpret an artifact’s use in context by providing socially constructed interpretive conventions. (p. 74)

The notion of technology affordances helps me see how their social, cultural and linguistic norms and values come into the play in Citizen Designer interface designs. The notion of affordance also helps me analyze technology use in a meaningful way especially in a cross-cultural digital contact zone.

Further, the notion of technology affordance is useful in the analysis of technology from the point of software design and its use by the actual users in practice. Mirel (2002) argues for a blend of procedural and structural support in software design for complex tasks and associates a genre of performance with her structural representation of social actions. (p. 177) She describes contextual and structural support as capturing functional relationships and typified actions in local contexts, and suggests that structural representations should organize performance instead of breaking down actions into steps. For her, structural representations “call forth shared performance goals for a given context and circumstance” and “reveal possibilities for action and offer performers ample latitude in specific behaviors based on their roles, arrangements of labor, infrastructure constraints, and the like” (p. 177). Indeed, technology affordance unfolds in this

praxis of use and develops as a result of the interplay of habituated and sociocultural factors. This notion of affordance is useful in the cross-cultural digital contact zone situation in which a particular technology is used by diverse users in the same discourse community and still privileges one group of users over others.

Affordance from a dialogical point of view helps to understand how cultural dimensions affect digital interface design and its use in the cross-cultural digital contact zone since the emergent affordance features manifest in a cross-cultural design. Affordance related to design features is the result of multiple articulations between users needs, commercial interests, cultural expectations, cultural constraints and so on. Therefore, it is necessary to design interface according to the users in the cross-cultural digital contact zone. This notion of technology enactment helps us overcome the stereotyping of periphery cultural and linguistic norms and values. Further, it is equally instrumental in doing away with the act of reducing concrete culture to static patterns. This idea of developing a dialogic rhetoric to facilitate dialogue between the center and periphery and between designers and users in a cross-cultural contact zone helps to initiate and sustain multiple interpretations.

#### **4.5.2 Affordances for Social Interaction**

Besides dialogical affordance, affordance related to socio-cultural environment is equally important for this study, as affordance emanates from socio-culture. The study of affordance from a socio-cultural perspective in HCI began in the mid-1990s when “the community of Computer Supported Collaborative Work (CSCW) began to loosely use the term “social affordance” to describe opportunities of technology that afforded social behaviors” (Sun, 2012, p. 76). According to Bradner (2001), social affordance is “the relationship between the properties of an object and the social characteristics of a given group that enable particular kind of

interaction among members of that group” (p. 132). Social affordances reflect how members of a social group interact with each other in a techno-mediated environment. This techno-mediated interaction should take human-to-human interaction and the features of technology into consideration. As to the relationship of social affordances with physical affordances, Bradner (2001) suggests that “social affordances arise out of the physical properties of an object when considered in the context of the social interaction that the object mediates” (p. 133). The social affordance of a technology comes from the fact that there is something inherent in the technology that compels certain social interactions among other similar technologies. When digital interface is designed by the participants in the cross-cultural digital contact zones, it foregrounds the cross-cultural contact zone dynamism. As a result, students from the periphery cultural and linguistic backgrounds feel themselves honored and acknowledged in the digital interface design. Social affordance also helps to keep the communication process very effective. In their discussion of the development of personal blogs for the past decade, Miller and Shepard (2009) refer to this compelling feature as “a suatory aspect” of affordances. It connects the material and the symbolic in technology use by motivating users to take the rhetorical action of blogging” (p. 77). Even if Brander’s view of social affordances fails to explain how these physical and social affordances are interconnected and interact during a user activity, it helps to distinguish them from each other in the context of digital interface design.

#### **4.5.3 Structured Affordances**

Like dialogical and social affordances, structured construct of affordances is equally important for this study since it is developed from activity theory. Albrechtsen et al. (2001) and Baerensten and Trettvik (2002) have developed a three-level structure of affordances informed by activity theory. Structured affordances are developed in an activity-relationship through

interactions between actors and objects, and Albrechtsen et al. (2001) and Baerensten and Trettvik (2002) argue that the concept of affordance should be treated as a generic concept that distinguishes affordance from “operational affordance” on the operation level, “instrumental affordance” on the action level, and “need-related affordance” on the activity level.” Influenced by the work of Baerentsen and Trettvik (2002), genre theory and British cultural studies, Sun (2012) further develops a three-level structure of affordance. According to her, “[a]ffordance consists of operational, instrumental, and social affordance” (p. 78). But she changes the need related affordances on the activity level to social affordance. In this transformation, social refers to social interactions on various levels including the individual, the community, and the society and cultural level. Similarly, social also refers to the different levels of affordances that interact and evolve through the process of technology enactment in the milieu of technology, user, and activity. Social affordances are the result of technology users’ interactions with instruments in terms of interface as electronic environments. Technology users’ cultural and linguistic backgrounds nurture their sense of social affordances. Various factors come into play in the distinction between instrumental and social affordances. User actions correspond to these instrumental and social aspects. Users realize activity-based affordances in the use of technology itself. Further, some affordances are designed into an artifact, and they are recognized and appreciated by users as intended by designers. On the other hand, other uses are developed beyond designers’ intention. These uses can be recognized by cultural use of technology, and this type of affordance cannot be designed in advance. These types of affordances emerge from interactions between different users in the cross-cultural contact zone.

The analytical and design approaches of Culturally Localized User Experience (CLUE) by Sun (2012) that integrates action and meaning are helpful in order to design for a holistic user

experience for culturally diverse users in the cross-cultural contact zone situation of FYC classrooms since its mission is to craft appropriately localized IT products to meet the cultural expectations of local users and their activities in concrete contexts. The tension between culturally localized user experience and global design of technology in Sun's model helps explore the tension between center and periphery issues in the design and use of technology in the cross-cultural digital contact zone since it highlights the praxis of use integrating key concepts and methods from activity theory, British cultural studies and genre theory. Similarly, CLUE places actual practices of use activities in local contexts. Technology affordances help unfold CLUE and the interaction between habituated uses and sociocultural conditions help to develop CLUE. The praxis of use is the cultural consumption in which the user localizes the technology for his or her need as well as transforms a material user experience into a subjective and symbolic one. The praxis lens of this framework helps to do away with the problem of stereotyping of peripheral culture. There is a creation of dynamic nexus of contextual interactions, and it manifests numerous articulations of practices and meanings through local culture. It is based on a dialogic view of culture that regards culture as an "open set of practices and as an energetic process with meanings, objects, and identities flowing across sites in diffuse time-space in an age of globalization" (Sun, 2012, p. 81). In this model, the user experience is both situated and constructed since it refers to complex relations between users and technology. User experience also consists of a material interaction with the artifact, its surrounding context and an interpretation process of this activity. User experience is both situated activity and constructed meaning in this framework. This model further helps to argue for democratic issues in the case of LMS interface and its use by different user groups and individual cultural and linguistic variations in the citizen designer interface designs.



Technology design in general and interface design in particular can be treated by CLUE as a dual mediation process. According to CLUE model, culturally localized user experience through interface design mediates both instrumental practices as well as socio-cultural meanings, and user experience is founded on this mediation. Sun (2012) argues that “user experience is a mediation process that includes tool-mediated production and sign-mediated communication. Only with this dual mediation process in mind can we successfully design technologies that work in local contexts” (p. 82). CLUE assumes structured affordance emerges from dialogic interactions and it is experienced through use. Similarly, CLUE takes affordance as the outcome of dialogic interactions between technology, user, and activity. Sun (2012) argues that “[i]t can help designers to locate user needs and prioritize design goals in the design process” (p. 82). Similarly, CLUE respects use practices of Citizen Designers and values their efforts at user localization. This particular interface design approach is very useful for cross-cultural technology design because it begins with the exploration of user activity in context and continues to design according to user life styles. Users play a pre-dominant role in this process of technology design since “user experience would not be meaningful without the involvement of users, user participation, interpretation, and contribution are important elements in the whole experience cycle” (Sun, 2012, p. 82). CLUE makes it possible to find a balance in cross-cultural design between different culturally and linguistically diverse users and their subjectivities. Another important aspect of this CLUE model is that it treats design as both problem solving and engaged conversation that helps to “foster an ongoing conversation between technology and users, technology and its surrounding local conditions, the local and the global, and designers and users” (Sun, 2012, p. 83). It promotes the notion of contextual technology design as opposed to universal technology design. It acquires its momentum with constant interactions and ongoing

dialogic relationships. These dialogic relationships between users and technologies play a crucial role in creating meaningful user experiences extending the interface design as problem solving to engage conversation between local and global in this age of participatory culture.

Different theoretical modalities discussed in this chapter help me analyze interface designs by Citizen Designers since they cover issues related to individual design activities to cultural and contextual, behavioral and writing structures and issues related to different types of affordances. In Chapter five, I analyze student responses to an empirical study of how Citizen Designers perceive current LMS interface designs, their interface designs and the relationship between interface designs and their contribution to Citizen Designer agency in the cross-cultural digital contact zone and how their design activities/knowledge enhance their writing activities.

## **Chapter 5: Assessment of Blackboard and other online platforms**

### **5.1 EMPIRICAL STUDY: AN INTRODUCTION**

I conducted a web usability test of several digital platforms including Learning Management Systems (LMS) such as Blackboard Learn and other platform such as Wikis and blogs with special focus on Blackboard. I conducted a usability test of these platforms because usability testing is concerned with “anticipating users’ needs and expectations” in terms of user assessment in design (Miller-Cochran & Rodrigo, 2009, p. 1). Similarly, a usability test is “always coupled with design” (Eyman, 2009, p. 223). Usability test of these platforms helped me raise democratic issues in technology design and advocate for LMS interface design according to LMS users in a cross-cultural digital contact zone. Further, being a rhetoric and writing student, I like to relate this cross-cultural technology design issue in a cross-cultural contact zone situation of UTEP to student agency and their writing since interface design knowledge is tightly connected with writing itself. Usability testing helped me understand the technology design needs of writing students from peripheral cultural and linguistic backgrounds at the University of Texas, one of the largest border universities in the US, where there is a large Hispanic student population besides other peripheral students from the US itself and other parts of the world. I used grounded theory to analyze data of my empirical study since grounded theory also deals with users’ experiences in a technology use. Because this study deals with technology users’ experience, Citizen Designers’ experience with Blackboard and other digital interfaces, I generate a theory based on my data collection since I do not fully depend on available research. Instead, through the analysis of Citizen Designer interface designs I am going to see how this theory works. In the process of generating a theory, I form research questions, recruit research

participants to develop a theory, use interview participants methods to collect data, code participants and their responses, analyze data, and discriminant sampling.

## **5.2 QUESTIONS FOR AN EMPIRICAL STUDY**

I seek to explore whether it is necessary to design technology according to users for the effective of technology through this empirical study. In order to achieve the goal of my study, I sought to answer the following three major questions.

1. How do Citizen Designers perceive current LMS interfaces in a cross-cultural digital contact zone?
2. How would Citizen Designers re/design LMS interface for a cross-cultural digital contact zone if they are invited to design it?
3. How would Citizen Designers' participation in LMS interface design help them acquire their agency in a cross-cultural digital contact zone?

From the introduction of this study I have been arguing that the current LMS interface design is influenced by dominant cultural and linguistic background. Further, I have also argued that the neutral and universal approach to LMS interface design is a subtle way of creating and maintaining a dominant hegemony upon periphery users. Still, I seek to test whether my personal argument backed up by expert voices in the field applies to the cross-cultural digital contact zone situation of writing classrooms or not. By asking these research questions above, I attempt to test whether my argument is correct. My major question in this chapter is how Citizen Designers perceive current LMS interfaces in a cross-cultural digital contact zone. I ask four questions based on current Blackboard interface design in order to confirm whether Citizen Designers feel themselves included on a current Blackboard interface. My second question of inquiry is how Citizen Designers would re/design LMS interfaces for a cross-cultural digital contact zone if they

were invited to do so. I also form three questions related to how they would change current LMS interfaces. Finally, I seek to know how Citizen Designers' participation in LMS interface design would help them acquire their agency in a cross-cultural digital contact zone.

### **5.3 EMPIRICAL STUDY OF BLACKBOARD AND OTHER PLATFORMS SUCH AS WIKIS AND BLOGS**

As I stated above, I selected Blackboard, course Wikis, and blogs for this study. I put great emphasis upon Blackboard for a number of reasons. First, Blackboard is a major LMS tool in terms of use in the LMS market. Second, Blackboard is designed as a neutral or universal platform, and I like to problematize this sense of neutrality or universality in a given context. Third, Blackboard is so system-oriented that the student writers in general and Citizen Designers in particular turn to be passive technology users in Blackboard online platform. As a result, Citizen Designers feel alienated since Blackboard design neither acknowledges their social, cultural and linguistic norms and values nor it does provide them a higher level of interactivity. Fourth, of course, my research subjects used Blackboard as a major LMS tool at UTEP. My assumption is that this so-called neutral or universal Blackboard and its comparison with other platforms such as Wikis and blogs can make students aware of cross-cultural technology design issues in a cross-cultural contact zone. Hence, I focus on how Citizen Designers perceive LMSs and other digital platforms and their use in a cross-cultural contact zone situation.

### **5.4 EMPIRICAL STUDY PROCEDURE**

To achieve the project goal and answer the stated research questions, I designed a survey tool, secured IRB approval and executed the survey. In the recruiting process, I gave priority to writing students' cultural and linguistic backgrounds/experiences. Therefore, the students with peripheral cultural and linguistic background/experience were my first priority. However, I also

selected writing students who identified themselves as students belonging to dominant social, cultural and linguistic backgrounds so that I could have a better picture of student perceptions towards these cross-cultural technology design issues. I call my research subjects Citizen Designers whether they come from dominant or peripheral cultural and linguistic backgrounds since my research subjects from both backgrounds advocated for higher-level interactivity and user inclusiveness on Blackboard.

My study went through four levels of inquiry. The first level involved the (online and/or face-to-face) execution of a simple survey with screening criteria to identify Citizen Designers who were composition students in general and composition students with peripheral cultural and linguistic background/experience in particular. In this case, Citizen Designers were UTEP students enrolled in FYC and upper division writing courses such as Workplace Writing and Technical Writing at the time of this research. For the execution of a survey, I requested my Dissertation Director and the Director of First-Year Composition then, Dr. Beth Brunk-Chavez to circulate emails to writing instructors to inform their students about my survey request. About nine FYC and upper-level writing instructors circulated my survey request to their students, and 241 students from different courses took the survey in different three semesters. Survey data was coded to determine which students met all of the screening criteria. I selected Citizen Designers from face-to-face, hybrid to 100% online format for a better understanding of technology design issues in a cross-cultural contact zone.

Table 5.1: Citizen Designers from Different Semesters and Their Technology Usage

Courses	Number of Citizen Designers	Semesters and Nature of Courses	LMS and/or Other Platforms Used in Writing Classrooms
FYC	9	Fall 2012/F2F and Hybrid	Blackboard 8, Wiki, Blog

Technical Writing	5	Fall 2012/Fall	Blackboard 8, Wiki, Blog
Workplace Writing	12	Spring 2013/F2F and Fall 2013/100% Online	Blackboard 8, Wiki, Blog

From the 241 students who responded to the survey I selected 26 Citizen Designers in three different semesters for interview. I selected fourteen Citizen Designers in Fall 2012 when UTEP was using Blackboard Service Pack 8. UTEP was licensed to use Blackboard Service Pack 9 in the Spring of 2013. I selected six Citizen Designers from Workplace Writing because it was a 100% face-to-face class. Because I recruited students from face-to-face and hybrid classes in Fall 2012, I attempted to explore how Citizen Designers in 100% online classes perceive LMSs next. Therefore, I selected six Citizen Designers from Workplace Writing in the Fall 2013 to make my research complete. Overall, I selected twenty-six Citizen Designers.

Because I advocate for a higher-level of interactivity with LMS technology in my research, I decided to study Blackboard 9 since the Blackboard Service Pack 9 designers claim that this new version of Blackboard provides more customizing opportunities to student users. I sought to explore what customizing opportunities were provided to student users in this new version of Blackboard. Student users could write their short introduction on their Homepage, upload a picture to their profile and had an opportunity to collaborate through Wiki and blog inside Blackboard if the course instructor allowed them to use these tools as a part of group collaboration. However, I came to know that those editing and customizing opportunities were to course instructors and other privileged course users. As a result, course instructors had direct access to edit and organize their course menu, and they were able to add content areas, tool links, sub-headers, and visual separators to the menu. Blackboard use was simplified to instructor and privileged user so that they could perform the above mentioned tasks in a simple and easy way.

However, other than providing multiple attempts to submit course assignments, updating what students have done so far as a part of their course, and creating a group discussion board, student users did not have any other customizing opportunities.

So far as the research subject selection is concerned, I clearly mentioned the screening criteria in the survey consent form. First, students had to be enrolled into at least one writing courses such as First-Year Composition, Workplace Writing, and Technical Writing to be selected as my research subject. Hence, my research subjects belonged to one or the other writing course at the time of their recruitment in my study. Second, writing students had to have a peripheral cultural and linguistic background and experience. I should make it clear right away that I did not identify my research subjects based on their last names and ethnic identification in University record. Rather ethnic, cultural, and linguistic backgrounds they provided and/or identified with in the survey form played an important role in my research subject selection. Most of my research subjects came from peripheral cultural and linguistic backgrounds. However, I also selected writing students who identified themselves with people from dominant cultural and linguistic backgrounds. Even if these writing students did not belong to peripheral cultural and linguistic backgrounds, they did have peripheral cultural and linguistic experience. By this, I mean to say that they either experienced themselves as the Other in the use of a particular tool targeted to users from different cultural and linguistic backgrounds or in the participation of a social event performed by people from different cultural and linguistic backgrounds. More than anything else, writing students from dominant cultural and linguistic backgrounds' familiarity with peripheral writing students' difficulties in the effective use of Blackboard due to cultural and/or linguistic differences inspired them to take part in the survey. I liked to include writing students from both central and peripheral cultural and linguistic



backgrounds so that I could get a complete user experience with these LMS and other technologies. Third, of course students' sentiments for democratic issues in the technology design played an important role in my research subjects. All these three different criteria played their roles in the Citizen Designer selection process.

Table 5.2: Numbers of Citizen Designers From Different Ethnic Backgrounds in Different Semesters

Semesters	Total Number	Number of Hispanics	Numbers of Anglo Americans	Number of Nepali
Fall 2012	14	11	2	1
Spring 2013	6	4	2	0
Fall 2013	6	5	1	0

Table 5.3: Numbers of Citizen Designers from Different Writing Courses

Courses	Total Number	Number of Hispanics	Anglo Americans	Nepali
First-Year Composition	9	6	2	1
Technical Writing	5	3	2	0
Workplace Writing	12	11	1	0

Table 5.4: Citizen Designers' Ethnic Background and First Language

Ethnic Backgrounds	First Language
Hispanics	Spanish
Anglo Americans	English
Nepalese	Nepali

As Table 5.2 and 5.3 chart above indicate twenty-one Citizen Designer come from peripheral cultural and linguistic backgrounds. A majority of Citizen Designers in this study are Hispanic since there is a majority of Hispanic students at UTEP. Eight Hispanic students are Mexican

nationals residing in that country and commuting across the border to attend UTEP whereas four have dual citizenship. And eight others are US citizens with Mexican origins. Spanish is first language for both the groups in Hispanic population. There is one Citizen Designer from Nepal and Nepali is her first language. Five Citizen Designers identify themselves with dominant cultural and linguistic backgrounds and three of them are Anglo Americans whereas two others are European American. In terms of writing courses, twelve Citizen Designers come from Workplace Writing whereas nine Citizen Designers from First-Year Composition. Only five Citizen Designers come from Technical Writing. All of these Citizen Designers used versions of Blackboard and other platforms such as Wikis and blogs as a part of instructional technology and designed web interfaces as a part of their e-portfolio or professional websites. Besides web interface design, Technical Writing students did web analysis. These Citizen Designers had various levels of technical knowledge and skills. One Workplace Writing student in Spring 2013 was a professional web and graphic designer whereas others were technically literate enough for an educational setting.

At the second or the interview phase of the project I conducted a usability test from cultural and linguistic perspectives in order to assess how Citizen Designers from various social, cultural and linguistic backgrounds perceive LMSs such as Blackboard and other platforms such as Wiki and blogs that they use in their writing classrooms for cross-cultural collaboration in a cross-cultural contact zone. For this phase of the project, I provided them with a list of questions before I met them for the usability test. The questions were prepared in order to assess how they perceive different LMS interfaces as well as how they would re/design them to include users from various cultural and linguistic backgrounds. During the interview, they would tell me how their participation in a LMS interface design would help them acquire their agency in a cross-

cultural digital contact zone situation of UTEP writing classrooms. This particular preparation phase gave them enough time to practice those questions as well as build a critical perspective toward LMSs. For their convenience and good understanding of what they were doing, I provided a glossary of some of the terms in case they were not familiar with some terms and notions used in my study. Students brought their personal computers and logged onto Blackboard and the other platforms to discuss their findings.

## 5.5 CITIZEN DESIGNER PERCEPTIONS OF CURRENT LMS INTERFACE DESIGN

After recruiting my Citizen Designers for my study according to my screening criteria, my next step in the research process was to understand how Citizen Designers perceive current LMS interfaces. I chose Blackboard, Wiki and blog interfaces for the assessment since they are the most commonly used platforms. Then I asked them whether they and/or other users from various social, cultural and linguistic backgrounds are included in BB interface design.

Table 5.5: Citizen Designers Responses to Current Blackboard Interface Design and Its User Inclusion

Semesters	Number of Citizen Designers	Number of Yes Responses and Percentage	Number of No Responses and Percentage	Number of Not Sure Responses and Percentage
Fall 2012	14	10/71%	4/29%	0
Spring 2013	6	3/50%	3/50%	0
Fall 2013	6	3/50%	2/33%	1/17%
Total	26	16/62%	9/35%	1/4%

Total of 14 Citizen Designers in the Fall of 2012, 10 of them said they were included in the Blackboard design whereas only 4 of them said they were not. This number changed substantially in Spring 2013 when 50% of them said they were included and another half said they were not included. Similarly, 2 out of 6 said that they were not included in a Blackboard

design in Fall 2013 whereas one of them was not sure about user inclusion or exclusion. Overall, 16 Citizen Designers said they were included whereas only 9 Citizen Designers said they were not included in the current Blackboard design whether it is Blackboard 8 or 9. Even if the sense of exclusion changed over semesters, it did not necessarily mean that Blackboard was inclusive before. Citizen Designers did not find Blackboard Service Pack 9 as customizable as it was announced by its designers. Citizen Designers in upper-level writing courses such as Technical and Workplace Writings felt excluded in Blackboard interfaces in comparison to FYC. May be students in upper-level writing courses have developed critical perspective towards many things including LMS and other similar platforms in comparison to FYC students.

Let's have a look at some of the sample "Yes" responses to the current Blackboard interface and its inclusion of users from various cultural and linguistic backgrounds.

Citizen Designer 5: It's not designed for a particular group. It kind of includes everyone in its design.

Citizen Designer 6: It's just a neutral interface, I guess. I do not think it is designed for any particular group of people.

Citizen Designer 11: Well, Blackboard has rather a minimalist design. It engages in inverse sense. It is universal in terms of its design, therefore, it does not exclude anyone. I think it is inclusive. With its minimalist design approach, it does not flaunt any culture or pride.

Citizen Designer 19: Yes. Because it does not matter what cultural and linguistic background you are from on Blackboard interface. It goes with either culture.

Citizen Designer 21: I say yes because I have friends of different cultures who use Blackboard just as effectively as I do. This leads me to believe that Blackboard took many cultures into consideration when creating Blackboard design.

The responses above are some of the sample responses from many others collected during the interview with Citizen Designers. These sample “Yes” responses are of interest to this study as most of them are by Citizen Designers from peripheral cultural and linguistic backgrounds. Citizen Designers argue that they are included in the Blackboard interface design because Blackboard uses neutral, universal and minimalist design approach. According to Citizen Designer responses, users irrespective of their cultural and linguistic backgrounds use Blackboard effectively. Sense of neutrality, universality, minimalist design and easy to use are taken for granted by Citizen Designers, and these user functions make Citizen Designers from periphery cultural and linguistic backgrounds feel that Blackboard interface design includes them.

After having a glance at those “Yes” responses from Citizen Designers especially from periphery cultural and linguistic backgrounds, let’s have a glance at some sample “No” responses.

Citizen Designer 4: It actually seems to me it is designed for the majority, so, people like me. I do not know whether they have taken it into account other various cultures using the interface or not. As far as, user friendliness goes, I really think that it could be better.

Citizen Designer 7: I think it is mainly for English language speakers. There is no other option to include other languages.

Citizen Designer 10: I think only Anglo American and Hispanic cultures are included in Blackboard design. The European cultures are not included in Blackboard design. I think

so because there are some ways that are geared towards Hispanic such as language that is used as formal diction, words that create simplicity.

Citizen Designer 12: There is just an English even if we are in a border city. Even if it is easy for me, it is not for other students who do not have good English and the navigation options are not in Spanish. I came to know about it when I did a Web analysis as a part of Technical Writing class.

Citizen Designer 18: I would say no. I think it is mostly geared towards American culture, so, it does not accommodate international students as it does domestic students.

Citizen Designer 20: My culture, yes. Other cultures, not so much. It's more based on the English, uh, American Anglo setting than any other cultures. You do not see it Spanish friendly or different culture friendly. I do not see it inclusive.

Citizen Designer 21: From my personal experience as a student who is fluent in both English and Spanish, I have to say that I think not every culture and linguistic background might be included in Blackboard design because I learned the struggle of learning a new language, and someone still in the process of learning English will struggle with this site. Therefore, I think not all other users from different cultural and linguistic backgrounds are included in Blackboard design.

The “No” responses are equally interesting because Citizen Designers from both dominant and periphery cultural and linguistic backgrounds argue that they are not included in the current Blackboard interface design since Blackboard uses Anglo American culture and standard English as default even if they are Blackboard users from other linguistic backgrounds. The most interesting finding is that Citizen Designers who identified themselves from dominant cultural and linguistic backgrounds advocated for users from various cultural and linguistic

backgrounds. They argued that even if they were included in the current Blackboard design, others from periphery cultural and linguistic backgrounds were not.

Overall, Citizen Designer responses show that current Blackboard interface design is not wholly inclusive since Citizen Designers from both dominant cultural and linguistic backgrounds argue that other users are not included in the current Blackboard interface design. Even if about seven Citizen Designers from periphery cultural and linguistic backgrounds find themselves included on a current Blackboard interface design because of its supposedly “neutral, universal, and minimalist design approach,” Blackboard interface design does not include them since it privileges one particular culture and language over others in a cross-cultural digital contact zone.

In order to reconfirm Citizen Designer responses to my first question in this section, I asked Citizen Designers what experience and expertise Blackboard assumes its users to have. Citizen Designer responses to this question help me recognize the target users of Blackboard.

Table 5.6: Current Blackboard Interface and Its User Experience and Expertise Assumption

Terms	Participants	Technically Advanced No./%	Familiar with Western Culture and Language in General No./%	Familiar with American Culture and Standard American Language in Particular No./%	All of them No./%	None of them No./%
Fall 2012	14	1/7%	6/43%	5/36%	1/7%	1/7%
Spring 2013	6	3/50%	1/17%	2/33%	0	0
Fall 2013	6	4/67%	1/17%	4/67%	0	0
Total	26	8/31%	6/23%	11/42%	1/4%	1/4%

The table above indicates that current Blackboard interface assumes its users should be familiar with Western culture and language in general and with Anglo American culture and language in particular. The responses above confirm the “No” responses to my first question

since they argue that current Blackboard interface is not inclusive because of its cultural and linguistic orientation to one particular group. Like in the first question, Citizen Designers in upper-level courses seem to be more critical about the use of language and culture on the Blackboard interface. For example, Citizen Designers in Workplace Writing in Spring 2013 and Fall 2013 point out that current Blackboard interface design assumes its users to be technically advanced and familiar with American culture and Standard American English. Table 5.6 indicates that these cultural and linguistic issues are more important in a 100% online class. The upper-level Citizen Designer responses are more critical about these cultural and linguistic issues than Citizen Designers from FYC. For example, almost 90% of Citizen Designers from FYC think that the current Blackboard interface design assumes its users to be familiar with Blackboard culture and language. Further, according to them, the current Blackboard interface does not assume its users to be technically advanced. On the other hand, 30% Citizen Designers from upper-division writing courses think that current Blackboard interface design assumes its users to be technically advanced since they know that whole issue of technical knowledge is related to the issue of affordability i.e., whether a technology is designed according to users' social, cultural and linguistic knowledge or not. Technical and Workplace Writing students seem to be aware of these affordability and other cultural and linguistic issues because of their maturity in terms of university experience or the courses they are taking.

After the analyzing of statistics, let's have a look at sample Citizen Designers responses to Blackboard interface and its user experience and expertise assumption question.

Citizen Designer 1: I would say a Blackboard user should be well versed on Anglo American Culture and Standard American English.



Citizen Designer 7: You do not have to be technically advanced. Of course, you should be familiar with the culture and language Blackboard design is oriented with. This knowledge helps you navigate through Blackboard. Again it is Standard American language. If you do not know the words and what they mean, it's hard to navigate through.

Citizen Designer 15: It is very technical because unless you navigate it, you really have to pay attention to where you move the cursor. Hence, it is very technical because it is not an easy manual. ... And the menus are very hard to navigate. It is not very easy to use. It is just technical. They changed Blackboard this year and the last one was easy than the current one.

Citizen Designer 16: From my personal experience, it assumes its users to have experience on Web 2.0 platforms as far as interactivity is concerned. Users just need basic typing skills and knowing difference between label and layer. It is just a basic knowledge of web platform. I think to a certain extent a user's culture and language matters, but in this melting pot environment that we live in, as far as technology savvy, everybody is in a certain level.

Citizen Designer 20: One should be familiar with the culture and language Blackboard design is oriented with as well as one should be well versed on Anglo American culture and Standard American English. I do not think one should be technically advanced, but you have to have some technical knowledge.

Citizen Designer 26: We have to be technically advanced to know how to navigate this online interface, be familiar with the language to understand the vocabulary and name of all the tools there, and well versed on Anglo American culture but mainly on Standard

American English to easily just click on the tools provided there and communicate effectively through writing with others.

Individual Citizen Designer responses through different semesters imply that the current Blackboard interface is not inclusive. Total of 42% responses support that Blackboard users should be familiar with Anglo American Culture and Standard American English in particular. Similarly, 23% of their responses bolster that users should be familiar with Western culture and language, and this is not basically different from Anglo American Culture and Standard American English as both of them stand for dominant cultural and linguistic backgrounds. These two make 65% of the total responses, and these responses maintain that Blackboard interface design is oriented toward dominant cultural and linguistic background. Similarly, 31% responses maintain that one should be technically advanced for the effective use of Blackboard. This issue of being technically advanced is related to the issue of affordability in the technology design. And this issue of technically advanced again confirms that Blackboard interface does not include users from various cultural and linguistic backgrounds in a subtle way even if users overtly think they are included in neutral-looking platforms.

Next, I sought to understand whether the use of language and graphics from users' cultural and social backgrounds had anything to do with creating favorable online environments. Critical discourse analysis and global language scholars argue that learners need to have something to base learning upon to build up knowledge, and I seek to understand whether this sense of familiarity for effective learning matters in the Blackboard online environment. I believe that the use of language and graphics has a great role to play in creating favorable online environments, and favorable online environments equally contribute to the effective use of Blackboard.

Table 5.7: Language and Graphic Uses for the Creation of Favorable Online Environments

Semesters	Number of Citizen Designers in Each Semester	Citizen Designers Who Believe Language and Graphics Build Favorable Online Environments	Citizen Designers Not Sure about Language and Graphics Contribution For Favorable Online Environments	Citizen Designers Who Believe Language and Graphics Do not Build Favorable Online Environments
Fall 2012	14	11/79%	0	3/21%
Spring 2013	6	5/83%	0	1/17%
Fall 2013	6	5/83%	1/17%	0
Total	26	21/81%	1/34%	4/15%

Citizen Designer responses above indicate that the use of language and graphics has a great role to play in the creation of a favorable digital environment whether the course is hybrid or 100% online. Total of 81% Citizen Designers agreed that language and graphics use play a great role in creating in favorable online environments. Only 15% of total Citizen Designers believed that language and graphics do not create favorable online environments. However, they didn't deny the importance of specific language and graphic use for the creation of an inclusive online environment. Here are some sample/representative "Yes" responses.

Citizen Designer 1: Yes, language use and graphics play a great role because they help to create a favorable environment so that I can relate them to my everyday life.

Citizen Designer 3: Yes, I think an environment does something to the learning process. When something is easy to follow, it engages students. As a result, they want to discuss subject, and it is positive to cognitive learning.

Citizen Designer 12: Language and graphics create a favorable environment so that I could relate them to my everyday life, and they would contribute a lot to the cognitive learning.

Citizen Designer 13: Graphics can contribute a lot in creating an inclusive online environment and enhancing the learning process. As far as language on Blackboard is concerned, it is confusing and it contributes nothing to the learning process. This way, I would say that the environment has a great role to play in creating an inclusive online environment and enhancing the learning process. But our current situation of Blackboard does not have anything to contribute to the learning process. Blackboard provides discussion, but it has nothing to do with creating an environment.

Citizen Designer 15: At Blackboard's current state, language and graphics have nothing to do. But they can contribute a lot in creating an inclusive online environment and enhancing my learning process if language and graphics are used in a proper way.

Citizen Designer 17: Yes, definitely. Um, they make it more fun, and they make you keep using it as opposed to trying to avoid it all. Yes, the use of words and graphics help building up an environment even if it is not case at this time. But the graphics definitely do create that if they were available.

Citizen Designer 20: I do not see language use and graphics fostering/enhancing learning environments. ... I think if they use appropriate graphics, they would affect it better for other cultures, but I do not take anything from it right now.

Citizen Designer 23: I do not think Blackboard is able to create an environment that could contribute a lot in creating an inclusive online environment and enhancing the learning process. ... By providing more interaction between blackboard and the user, there would be a better learning environment.

Here are some of sample/representative "No" responses.

Citizen Designer 6: Not really. There is not any graphic to help the users on Blackboard. It has lack of graphics. They have nothing to do with creating an inclusive online environment and enhancing the learning process. If there were new students, they would get benefitted from the graphics, but not necessarily the learning. The students would benefit by navigating. Otherwise, they have nothing to do with my learning process because learning is not affected by environment.

Citizen Designer 18: Language use and graphics do not make any different in learning process. I do not think so. As far as graphics go, they can serve as an organizational tool. But as far as enhancing learning tools, they do not have any role. It certainly does not hinder. But so far as associating knowledge upon them, they definitely help to solidify the learning. As far as the grasping of the concept, I suppose it can.

Here is one “Not Sure” response:

Citizen Designer 21: I am not sure because the main reason I log on Blackboard is to check my classes in general, and if my professor needs me to access Blackboard I will. I do not log on Blackboard for anything else. On a subconscious level it might have something to do with my learning process, but not consciously.

Besides four “No” and one “Not Sure” responses, all other responses point out that language and graphics have a great role in creating favorable and inclusive online environments. Citizen Designers pointed out that the use of users’ language and graphics help users connect their everyday real life to online environments. Citizen designers pointed out that the use of users’ language and graphics helps users connect online environments to their cultural and linguistic norms and values. Their responses confirm that the current Blackboard neither includes users from various cultural and linguistic backgrounds nor does it provides users an opportunity to engage in a higher-level interaction so that they could customize accordingly. Citizen

Designer 23 above argues that with the higher-level interaction with Blackboard, there would be a better learning environment.”

## **5.6 LMS DESIGN FOR A CROSS-CULTURAL DIGITAL CONTACT ZONE**

My second major question in this chapter is how LMSs should be designed for a particular context like writing classrooms in a cross-cultural digital contact zone. Even if my Citizen Designers were not technically expert to design and create appropriate LMS software for a cross-cultural digital contact zone, I asked for their LMS interface design ideas as LMS users in a cross-cultural digital contact zone since the current design neither includes users from various cultural and linguistic backgrounds nor does it allows users to design according to their needs. For this, I formed the following question:

How would Citizen Designers re/design LMS interface for a cross-cultural digital contact zone? In other words, I sought to understand how they would re/design LMS interfaces for a cross-cultural cultural contact zone situation like writing programs at UTEP. In order to get their responses to this major question, I formed the following four questions to inquire whether they would change current Blackboard interface for a cross-cultural digital contact zone:

1. Would you change current Blackboard interface to transform it into a cross-cultural platform?
2. If so, what would you change?
3. How would you include users from various cultural and linguistic backgrounds on Blackboard interface re/design in a cross-cultural digital contact zone?
4. Would it be good to allow users to customize Blackboard?

First of all, I sought their responses to my first question i.e., whether they would change current LMS interface to transform it into a cross-cultural platform.

Table 5.8: Transforming Current Blackboard Interface into Cross-Cultural Platform

Semesters	Citizen Designers	Yes	NO
Fall 2012	14	14/100%	0
Spring 2013	6	6/100%	0
Fall 2013	6	4/67%	2/23%
Total	26	24/92%	2/7%

The table above indicates that they would certainly change parts of Blackboard Learn in order to transform it into a cross-cultural platform. Total of 24 out of 26 Citizen Designers or 92% responses stood in the side of changing current Blackboard interface into cross-cultural platform. Only 2 Citizen Designers in Fall 2013 said that they would not change anything. This statistics indicates that Citizen Designers realized that the current Blackboard is not designed to include users from various cultural and linguistic backgrounds. Here are some sample “Yes” responses:

Citizen Designer 10: Yes, I would definitely. I think I would make it much more accessible to people from different cultures.

Citizen Designer 11: Yes, I would change parts of Blackboard to create an online environment that helps all participants feel at home.

Citizen Designer 12: Yes, I would because it would be easier to future users to navigate through. Users can help the design what exactly needs to be done to a particular technology.

Citizen Designer 21: Yes I would change parts of Blackboard to create an online environment that reflects all participants.

Citizen Designer 22: Yes, I would change parts of Blackboard to create an online environment that reflects all participants, and it makes them feel at home.

Here are two “No” responses:

Citizen Designer 23: No, I wouldn't change it, not because it works perfectly but because if I change it, probably Blackboard would end up being more complicated for other culture. I think that to change Blackboard there is a need to do a research of the different cultures that use blackboard.

Citizen Designer 26: No, I won't change because everything is working perfectly. Current Blackboard online environment really makes you feel that you are in a classroom, and your opinion is always considered. I think it is even better than an actual classroom since everyone must participate through discussions.

Sample "Yes" responses above from Citizen Designers irrespective of their cultural and linguistic backgrounds indicate that the current Blackboard interface should be changed in order to transform it into a cross-cultural platform in a contact zone. Citizen Designers argue that an LMS such as Blackboard should be designed including cultural and linguistic norms of its target users. Citizen Designers argued that LMS users' cultural and linguistic norms and values should be visible in its online environment. Similarly, Citizen Designers pointed out that they would re/design Blackboard interface to make it more accessible to users from various cultural and linguistic backgrounds. The "No" responses above also do not fundamentally disagree with re/designing Blackboard interface according to its actual users. Citizen Designers pointed out that Blackboard interface should be re/Designed after a much deliberation and research to include its target users. Hence, Citizen Designers directly or indirectly pointed out that they would change current Blackboard interface.

Second, I attempted to know what they would change in order to transform it into a cross-cultural platform for writing classrooms at UTEP.



Table 5.9: Factors that Contribute to Transform Blackboard into a Cross-Cultural Platform

Semesters	Citizen Designers	Word Choice	Adding Language and Translation Tools	Colors	Navigation	Graphics	Other/s
Fall 2012	14	1/7%	8/57%	1/7%	6/43%	4/289%	0
Spring 2013	6	3/50%	3/50%	3/50%	4/67%	2/33%	0
Fall 2013	6	1/17%	2/33%	2/33%	4/67%	2/33%	1/17%
Total	26	5/19%	13/50%	6/23%	14/23%	8/31%	1/4%

The table above indicates that Citizen Designers placed great importance on the navigation aspect of Blackboard interface. Navigation refers to the overall operation of the technology, and use of language and graphics can contribute to navigation significantly. Since different Citizen Designers came from various cultural and linguistic backgrounds in the contact zone, they gave great importance to adding language choices and translation tools since the current Blackboard interface does not provide this facility. As a result, Citizen Designers from various cultural and linguistic backgrounds are experiencing difficulties while navigating Blackboard. Similarly, Citizen Designers gave great importance to graphics since specific graphic use has a lot to do with visual aspect of technology in general and Blackboard in particular. Citizen Designer responses to this question also reconfirmed their responses to previous questions that were related to user inclusion in the current Blackboard interface design.

Here are some of the sample responses:

Citizen Designer 3: I would change navigation and graphics. For example, when it says assignments, I would add probably a picture that is related to list of assignment or something. More color, the videos on the right space and arranging them differently. I

would change with language as well. I would definitely change language so that there won't be words with double meanings.

Citizen Designer 4: I think as far as a language choice and the translation tools, I think that it could be little bit like... Some of the words used on BB are little advanced especially for people who are like English as a Second Language Speakers. I think that it would be important to address and kind of make it more like basic terminology as opposed to like technical jargons.

Citizen Designer 10: I would definitely change the word choice and language choice and translation tools. Also, I would use different colors and images. I would change the word choices because there are people who do not understand some words or who are not happy with those common words or notions. They like more specific from different perspectives. Language choice and translation tools would help people because there are not certain words that cannot be elaborated in English. Colors are not visually appealing.

Most of the Citizen Designers emphasized the language choice thinking that it would be better for them Blackboard did have a Spanish language option since the majority of student in a border university like UTEP came from a Hispanic language background. Similarly, they would work on the navigation aspect of Blackboard since navigation is closely related to specific use of language, word choices and graphics.

Citizen Designer 12: I would change the language choice because there is no Spanish right now. UTEP is in El Paso and we are border city and we have a lot of Spanish speakers. I asked the users to navigate through Blackboard to know whether they had any problems in navigation due to language as a part of web analysis, they said yes. I would also change the navigation as sometimes the links take me to a totally different place.

May be I will put more images as it is just a writing. I would more focus on visual as I myself am a visual learner. My first priority would be putting the translation tools on Blackboard.

Citizen Designer 15: First, I would change navigation. Second, I would add more images. Third, I would change language choice and translation tools. ... When there are better graphics, it is easier to use. Now it is so much of reading. When you click menu, you go to another menu. It is like a backward right now. I will make it very straightforward. If I want to click syllabus, I should be able see my syllabus at one stop. But now it is very much like jumping around.

Citizen Designer 16: As a graphic designer and web developer, I have so many things to do. I think that the modular based approach that they have been taking is sufficient. I do not think that everyday student is ready for that or so much sees that in the most sufficient way to use Blackboard because I know personally when I log into Blackboard, for a few times, I have to/skip all those modules and go to the course straight. That may be personal preference. One thing I would change is create a broader module interface where you have your class, all your different courses, and may be information for those different courses. Divided that way, I think its design right now, it becomes a hotchpotch information of different things, and it gets confusing too.

Citizen Designer 20: I would definitely say the word choice. I would like to see the translation tools, colors, work on navigation for easiness. I would definitely put more graphics.

Citizen Designer 25: I would make navigation simpler and add images and icons to make tabs and modules easier to understand.

Citizen Designer 26: Language Choice and Translation Tools. This would be the only thing I would change so that way I wouldn't have to leave Blackboard to use Google translate when I need help translating a word from English to Spanish.

The responses above indicate that Citizen Designers would change language, add translation tools, and make navigation easier with the change in language and graphics. Their responses put great emphasis upon language and graphics since language and graphics have a great role to play in creating an inclusive online environment as indicated above. Citizen Designer 12 argued that the Blackboard interface should be designed to include users in the US-Mexico border since UTEP is a border university. She raises the democratic issues in a particular discourse community, and, according to her, a discourse community member and his or cultural and linguistic norms and values should be acknowledged/recognized when cultural and linguistic norms and values of another user are acknowledged/recognized by the same discourse community. Citizen Designer 16, graphic designer as well as web developer by profession, argues that the current Blackboard design is not appropriate to Blackboard users at UTEP. His response aligns with Citizen Designer 12.

Research participants such as Citizen Designer 22 in Fall 2013 opined that it was necessary to provide customizing opportunities to Blackboard users instead of changing color, word/language and navigation. Here is what he said:

Citizen Designer 22: I would add customization options. Being able to self-design the layout would make Blackboard much more inviting.

Citizen Designer 22 thought that, instead of providing word/language options, changing color and navigation, it would be better to provide customizing opportunities to Blackboard users so that they could change what they like. Even if it is a single response in terms of question at hand,

almost 95% Citizen raised advocated for this user activity on the Blackboard interface while answering other questions in this study. I consider this issue of providing customizing opportunity to users invaluable since this study advocates for a higher-level user interactivity with LMS through customizing opportunities, I am going to discuss on this issue later.

Because the current Blackboard interface design does not include users from various cultural and linguistic backgrounds, I inquired Citizen Designers how they would include users from various cultural and linguistic backgrounds on Blackboard interface re/design in a cross-cultural digital contact zone. Since my Citizen Designers used Wiki and blogs besides Blackboard for a course instructional purpose, I asked them to compare current Blackboard interface design with other platforms Wikis and blogs. As a part of this comparison, I inquired them what particular aspect of other platforms such Wikis and blogs they like, and how they would ensure user activities on LMS interfaces. Citizen Designers compared and contrasted Blackboard with Wikis and blogs in terms of user functions and found Blackboard restricted users from a higher-level interactivity. Besides asking what user functions Citizen Designers liked to get as Blackboard users, this questioned also asked them how active learning could be guaranteed on LMS and other platforms so that users could have an opportunity to learn by doing.

Table 5.10: Factors that Contribute User Activity on Blackboard Interface

Semesters	Citizen Designers	Providing Users with Customizing Opportunities	Involving Users in the Design Process	Designing According to User Needs	None of the Provided Options
Fall 2012	14	6/43%	4/29%	4/29%	0
Spring 2013	6	4/67%	2/33%	0	0
Fall 2013	6	4/67%	1/17%	1/17%	0
Total	26	14/54%	7/27%	5/19%	0

The table above indicates that Citizen Designers as users of an LMS such as Blackboard and other platforms such as Wikis and blogs either like to be included in interface designs or have some customizing opportunities. A total 54% of the Citizen Designers gave great priority to customizing opportunities so that users could play around in these platforms and customize them according to their needs. Similarly, 27% of the Citizen Designers gave priority to a notion of participatory design in which users are involved in the design process. Next, 19% of the Citizen Designers also went for the notion of designing technology in general and LMS interface in particular according to user needs. Designing LMS interface also could be equally important in a contact zone situation since technology users in a contact zone situation feel included in a design. Since the current Blackboard interface does not have any one of them at present, Citizen Designers think they are important for a cross-cultural contact zone situation so that either LMS interface include its users in the design process or they provide users with customizing opportunities. Most importantly, Citizen Designers opted for customizing opportunities to Blackboard users, and this particular opportunity to users ensures a higher-level interactivity with LMS in general and Blackboard in particular. Here are some representative responses:

Citizen Designer 4: In comparing Blackboard to other interactive websites, I think that the other interactive websites are better than Blackboard just because of the customizing ability. ... I think that the ability to customize would really help people staying engaged. If I had more ability to customize or use, it would help me, I guess, be more engaged in doing the work and also in producing better quality assignments.

Citizen Designer 7: As far as things you can do, Wikis and other interactive websites are far better than Blackboard because students can do thing in their own way. That's one of the freedom you do not have with Blackboard. This freedom would provide you more

comfort. ... They would create an environment that would make you feel comfortable for sure. Also, all participants would have their say in such environment. Also, cross-culturally, they have their way there. They definitely help you getting acknowledged. I think many people do not need to be dominantly present on the website, but, at least, it would make others in the discourse community to feel their presence. It makes a lot better for them instead of having it at all.

Citizen Designer 9: I like Wiki and Web. I like Wordpress. In terms of design, flexibility, pages and application options, these interactive websites are way better than Blackboard.

Citizen Designer 10: Blackboard is very inferior to Wiki as it opens different directions of design. You can talk to so many students at a time through Wiki. It is always good to be able to do different things on the online environment, but Blackboard does not allow you to do all these. It is good to be an active user.

Citizen Designer 11: Both Blackboards and other interactive websites are necessary and essential for students. But Blackboard does have constraints for different user activities. But I believe that does not make it exclusive. Wiki allows you to be who you are. Blackboard is not even influenced by languages that are spoken at UTEP. That being said, it is American indirectly. Everyone should recognize a single culture in this global world.

Citizen Designer 15: I would make it more customizable so that I do not speak English I like to customize it based on the choice of my language such as Spanish or French. I would remove certain buttons that are not necessary whereas put others that are necessary.

Citizen Designer 16: I prefer something with higher degree of customizability because it does allow you to be visible as well as developing efficiency, productivity because it allows you to do what you need and eliminate all the other bluff.

Citizen Designer 19: It is necessary to acknowledge members' cultural and linguistic norms and values in a website design in a particular website design because not everybody belongs to western culture. As far as being students, all of them are students regardless. There should be at least a section on a website where they could change when do not understand on a website. But I could say that it is not good idea to include one culture, you should include the cultures that belong to members in a particular discourse community while designing website.

Citizen Designer 23: By customizing their Wiki or blogs they maintain their cultural and linguistic norms, because they can add that information to the blog they can even write in their language. That is what makes them feel like home, because they change everything just they way they have it at home.

Based on Citizen Designers' responses, they prioritized design or customizing opportunities over involving users in the LMS design process and designing LMS according to users. Citizen Designers should be mindful of the fact that they could play around, exercise and experiment their learning with this user opportunity or function. Secondly, they opted for user involvement in the LMS design process so that users' actual needs are included in the design process. At the least, they wished LMS designed according to various user needs. This indicates that they like user needs and functions implemented whether in or design- or use-level as customizing opportunities are exercised at the time of use whereas user involvement implements user needs at the time of LMS design. These are some of the user functions that ensure user



interactivity with technology in general and LMS in particular. These user functions play an invaluable role in their prioritizing Wikis and blogs over Blackboards. Moreover, these user function are more important in the cross-cultural contact zone situation than in any other situations since these user functions work for the creation of inclusive online and or user empowerment whether at the time of interface design or in the use process.

Because Citizen Designers preferred providing customizing opportunities to LMS users so highly over involving users at the design process or designing LMS addressing user needs, I was curious to know whether it was good to let users re/design the LMS interface. I asked them whether they would provide customizing opportunities to the LMS users since Citizen Designers kept on referring to this opportunity while answering my other questions. This is one of my major questions even if it is asked as one of the supporting questions to my second major question. I valued this question at the beginning of the usability test since my study advocated for the user inclusivity and higher-level of interactivity with the LMS interface. This question is one of the major questions because it is related to student agency in the cross-cultural contact zone and enhancement of student writing through interface design activities. I also valued this question highly since some people think that customizing opportunity to LMS users takes away the purpose of LMS.

Table 5.11: Whether It Is Good to Provide Users With Customizing Opportunities

Semester	Citizen Designers	Yes	No
Fall 2012	14	11/79%	3/21%
Spring 2013	6	4/67%	2/33%
Fall 2013	6	5/83%	1/17%
Total	26	20/77%	6/23%

The table above indicates that 77% of the Citizen Designers advocated for letting users design interface the way they like. These Citizen Designers thought that there was nothing wrong in providing LMS users with customizing opportunities. They believed that providing users with customizing opportunity did not take away with the purpose of LMS, rather, it played an invaluable role in facilitating active learning in an LMS online environment. Here are some “Yes” responses:

Citizen Designer 2: I would let users design interface the way they like. It helps them reflect their personality, culture and stuff like that.

Citizen Designer 4: I do not think that letting users customize does any negative impact. It would be definitely hard to implement at first, and it would definitely need some sort of workshop or whatever to give users to knowledge and tools so they would be able to customize. But I think overall, once they get comfortable with the environment, they would be more able to add their own. ...

Citizen Designer 6: Customizing helps users from participating culture and language to be visible. It's important, otherwise, they won't use that interface.

Citizen Designer 10: I would go with letting users design the interface the way they like. If they are able to design in their own way, not necessarily like Facebook or something like that, but biography of themselves and if others could contact them and help them or work with, it would be useful. Just create a common ground. As far as interacting with the same or similar people such as educational background, their majors, taking similar classes, it would be easier for them to contact each other.

Citizen Designer 7: It is definitely a good thing for a user to be active because it would create close relationship between students and Blackboard. They would probably get on more, and they would find it easier to navigate when they design in their way.

Citizen Designer 11: I would let the users design the way they like because certain people organize things differently, so, if you let them design interface they like, it would be like a notebook. Organizing the interface and moving around the modules would be something personal, and it makes the users feel they did it.

Citizen Designer 17: It's been proved times and times again that customizable something is more and more important. ... The customizing opportunity does not lead to messing up of opportunity rather people would feel more comfortable when they use it.

Citizen Designer 20: I would let users design interface the way they like. I would like to design from my own way. I would go it more often if I had a chance to re/design it to make it what I felt. That was part of me, you know. Right now, it is just cold. If I were to make it warm, I would make it according to my feeling. Giving an avenue, makes people busy or work more.

Citizen Designer 22: I would let users design the Blackboard interface the way they like.

Citizen Designer 23: I think everyone could use the customization tools to change the Blackboard interface and make it more accessible to everyone.

Here are some "No" responses:

Citizen Designer 1: Um, well, everybody does have different user needs, so, that applies very well because every individual has his or her perspectives and needs. Changing interface by anyone is not a good idea.

Citizen Designer 5: I won't let users design interface the way they like because if you give them a lot of options, they would take away from the purpose from Blackboard which is just for doing homework.

Citizen Designer responses above emphasize providing users with the customizing opportunities. Citizen Designers were mindful of designing technology according to user needs since user needs based on cultural and linguistic backgrounds of users. This also helps users use language, graphics and other cultural signifiers that belong to them. This particular sense of user belongingness promotes the sense of sense of ownership, and this sense of ownership helps to create inclusive environment for users from various cultural and linguistic backgrounds. Most importantly, this helps to create favorable online environments instead of alienating them in LMS online environments.

## **5.7 LMS INTERFACE DESIGN FOR STUDENT AGENCY**

My third major question in this study is related to LMS interface re/design and its contribution to student agency and its contribution to student agency in university writing classes. Therefore, I sought to explore how Citizen Designers would acquire their agency in a cross-cultural digital contact zone and formed the following question:

How would Citizen Designers' participation in LMS interface design help them acquire their agency in a cross-cultural digital contact zone?

Because current Blackboard is designed as mono-cultural and mono-lingual platform in the name of a universal or minimalistic technological design, I designed two questions focusing the cross-cultural technology aspect of technology design since this particular technology is appropriate in the cross-cultural digital contact zone. Further, cross-cultural approach to LMS design can be invaluable to user agency in the cross-cultural digital contact zone since this design approach

includes technology users and their cultural and linguistic backgrounds either in its design itself or in its use by users from various cultural and linguistic backgrounds. My two questions are as follow:

1. How would cross-cultural technology design approach in a Blackboard interface design contribute Blackboard users from various cultural and linguistic backgrounds?
2. How would your participation in a BB interface re/design help you acquire your agency in a cross-cultural digital contact zone?

First, I began with how cross-cultural technology design would contribute to Blackboard users from various cultural and linguistic backgrounds. This question emphasized upon the importance of cross-cultural technology design approach for a cross-cultural digital contact zone.

Table 5.12: Cross-Cultural LMS Design and Its Contribution to Users from Various Cultural and Linguistic Backgrounds

Semesters	Citizen Designers	Creating Favorable Online Environments	Ensuring Equal Say	Making Users Visible in Its Design	Enhancing Users' Cognitive Learning	Other
Fall 2012	14	13/93%	3/21%	12/86%	6/43%	0
Spring 2012	6	5/83%	2/33%	6/100%	3/50%	0
Fall 2013	6	5/83%	2/33%	5/83%	4/67%	1/17%
Total	26	23/88%	7/27%	23/88%	13/50%	1/4%

The table above indicates that cross-cultural focus on LMS interface design contributes its users through creating favorable online environments, making users visible in its design and enhancing users cognitive learning in a cross-cultural digital contact zone. Because Citizen Designers found the current Blackboard online environments exclusive and unfavorable, they believed that cross-cultural LMS design approach would help them create favorable online environments. A total of 88 % Citizen Designers believed that cross-cultural LMS approach would create favorable online

environments. Similarly, equal percentage of Citizen Designers believed that cross-cultural LMS interface design approach would make users from various cultural and linguistic backgrounds visible in a cross-cultural digital contact zone. Here are sample responses:

Citizen Designer 3: I think it helps participants feel comfortable in the online environments because of the representation of their cultural norms and values, and it also ensures equal say from people from participating cultures.

Citizen Designer 5: It ensures equal say from people from participating cultures. It is important because you are already a member of a community, then if you are already included in the website, you kind of feel more comfortable and being acknowledged. Also, if you feel comfortable, you are more going to participate in a discussion or something and provide your opinion. Also, one gets more biased when one's culture is acknowledged, and one further focuses on his culture or language.

Citizen Designer 10: It helps people from participating culture and language to be visible. Also, it makes participants feel at home as well as it enhances cognitive learning.

Citizen Designer 15: They enhance learners' cognitive learning. Secondly, they make participants from different cultural and linguistic backgrounds feel at home. The biggest thing is they open the door for learning opportunities. Finally, they make feel comfortable so that you will be more willing to learn. If I do not make you comfortable, you do not like to learn. Then it enhances learning.

Citizen Designer 17: It helps people interact with different one. Make them feel important than just shut out or neglected. It makes them feel more at home. It definitely enhances their cognitive learning. They feel more useful than neglected as I said. I think it is very advantageous.

Citizen Designer 23: It creates an environment of learning where the participants learn of other cultures and they show some part of their culture, that way everyone can learn a little about different culture. That is an advantage of the cross-cultural learning.

Citizen Designer 25: It helps participants feel comfortable in the online environments because of representation of their cultural norms and values. If a student feels comfortable using Blackboard they will be inclined to use it more often.

Almost 90% of Citizen Designers believed that cross-cultural LMS interface design contributes a lot for the promotion of user agency in a cross-cultural digital contact zone. They fully agreed with the importance of cross-cultural focus on technology or LMS design at least for a cross-cultural contact zone situation. Only one participant seemed to disagree with this approach in LMS design. However, when she said “[i]t depend(ed) upon the purpose of the website,” she also did not disagree with the cross-cultural focus since this approach in LMS design could include users from various cultural and linguistic backgrounds.

After getting their views on cross-cultural approach in LMS interface design, I sought to understand how their involvement in the LMS interface design would help them acquire their user agency in a cross-cultural digital contact zone. I attempted to explore how their design activities would allow them to exercise rhetorical skills as well as implement their design ideas/skills in a cross-cultural contact zone situation through this question, as the current LMS design does not incorporate their LMS interface design ideas and experiences.

Table 5.13: Citizen Designers Acquiring Agency through LMS Interface Design

Semesters	Citizen Designers	Maintaining Who I am Culturally and	Exercising My Design Skills	Exercising My Design Decision	Designing Interface According to User	Incorporating Participating User Cultural and

		Linguistically			Needs	Linguistic Norms and Values
Fall 2012	14	7/50%	6/43%	3/21%	2/14%	7/50%
Spring 2013	6	3/50%	1/17%	1/17%	3/50%	0
Fall 2013	6	5/83%	2/33%	0	2/33%	0
Total	26	15/58%	9/35%	4/15%	7/27%	7/30%

The table above shows that Citizen Designer responses preferred maintaining their cultural and linguistic identity in the LMS design to exercising their design skills. However, it does not indicate that they do not like to exercise their design skills. They wish to exercise their design skills as 35% responses bolster this option. Most importantly, Citizen Designers believed that their participation in the LMS interface design guarantees their agency whether through letting them exercise their decisive power or implementing their cultural and linguistic norms and values in the design process. Here are some sample responses:

Citizen Designer 1: It provides me an opportunity to introduce myself as who I really am. That way, it won't be that one generic and introduce Hispanic or any other culture in there.

Citizen Designer 10: It provides me an opportunity to bring some graphics that come from my culture that make me feel acknowledged, and it is the most contributing factor. It helps my culture being acknowledged.

Citizen Designer 15: It would provide them with a power and ability to design it. That leads to providing a decisive power in the design of the interface as well as it provides an opportunity to bring some graphics that come from my culture that make me feel acknowledged. Also, it provides me an opportunity to design the technology according to the users' need. Everybody's needs are different. ...



Citizen Designer 16: I think it starts from the user. So, getting that first level input from the end users allows them to gear their design towards the people who are going to use the website. I think it makes very efficient and smart way to design. It is going down to the user level, and it includes how would you like this website; what tools could be put there if you interact with your colleagues. I think that's a very important way to get it designed rather than designing from the top down. I think that's almost a way of designing something. I think that the design knowledge is really related. If you contribute content, it is more related to your culture. Whether you are design savvy or not, there is more of levelness with that aspect.

Citizen Designer 22: It also provides me an opportunity to design the technology according to my need.

Citizen Designer 23: My participation would tell them basically who I am and where I come from. That would be a chance of introducing as well as maintaining myself both culturally and linguistically. And it gives me an opportunity of customizing a webpage to my needs and the needs of people from different cultures.

Citizen Designer responses above indicate that acquiring user agency is a very important aspect of technology use for technology users in general and LMS users in particular. Citizen Designers like wish to be who they are culturally and linguistically as this process of keeping user cultural and linguistic norms and values helps users acquire their agency in an online environment created by technology. Total of 58% responses confirmed that designers acquire their agency through maintaining their identity culturally and linguistically in a design process. Similarly, 35% responses confirmed that designers acquire their agency through the implementation of their design skills in the LMS interface design process. Another 15%

responses confirmed that Citizen Designers acquire their agency through exercising their design decision. Similarly, designing LMS according to user needs or incorporation of users' cultural and linguistic norms and values in the design helps Citizen Designers acquire their agency in a cross-cultural digital contact zone.

## **5.8 IMPLICATIONS OF CITIZEN DESIGNER RESPONSES**

Even if a total of 62% of the Citizen Designers believed that they were included in the current Blackboard interface design, their responses to other questions did not support what they believed. They believed that they were included simply because of a universal technology design approach of Blackboard. This universal technology approach in Blackboard interface design helped it appear neutral, however, this neutral platform did not necessarily include users from various cultural and linguistic backgrounds. Interestingly, they were Citizen Designers who that believed they were included in the current Blackboard interface design belonged peripheral cultural and linguistic backgrounds. Actually Citizen Designers from dominant cultural and linguistic backgrounds found current Blackboard interface design was exclusive because it did not include cultural and linguistic norms and values of users who came from other cultural and linguistic backgrounds.

When a total of 31% of the Citizen Designers believed that current Blackboard assumed its users to be technically advanced. This clearly indicates that Blackboard interface design is not inclusive, and it is not designed according to users from various cultural and linguistic backgrounds. Further, it also indicates that Blackboard actually is not a complex platform that demands users to have advanced technological knowledge and skills, rather, it is not designed according to users from various social, cultural and linguistic backgrounds. In this sense, it

seriously violates the notion of affordability in the design of technology. A total of 65% of the Citizen Designers believed that Blackboard users had to be familiar with the Western cultural and linguistic norms and values in general and Anglo-American cultural and linguistic norms and values in particular for the effective use of Blackboard. Similarly, a total of 81% of the Citizen Designers believed that this neutral looking Blackboard design did not create a favorable online environment for users from various cultural and linguistic backgrounds. According to them, interface design had to incorporate users' language(s) and graphics that reflected users' cultural signifiers for the creation of favorable online environments. All these statistics and Citizen Designer responses clearly showed that current Blackboard interface design excludes Blackboard users from various cultural and linguistic backgrounds.

Next, realizing the exclusive nature of current Blackboard interface design, Citizen Designers emphasized the cross-cultural technology design approach for a Blackboard interface design. A total of 92% of the Citizen Designers believed that Blackboard had to be developed as a cross-cultural platform instead of universal platform that recognizes dominant cultural and linguistic norms and values. According to them, in order to develop Blackboard as a cross-cultural platform, word choices, language translation tools, and user-specific graphics should be installed. Citizen Designers pointed out that the Blackboard interface design was not culturally localized. Therefore, Citizen Designers from Hispanic or US-Mexico border backgrounds felt themselves excluded in the current Blackboard interface design. Citizen Designers believed that users had to be provided with the customizing opportunities so that users could re/design Blackboard interface to affect the design. This particular re/design of Blackboard interface would definitely function as a democratic user empowerment. Besides providing customizing opportunities to users, they pointed out that Blackboard users should be involved in the

Blackboard interface design process. This clearly indicates that Blackboard should be designed according to its users for a particular context. Most importantly, Citizen Designers believed that Blackboard users in a cross-cultural digital contact zone had had to be provided with customizing opportunities. This would play a tremendous role in developing Blackboard as a new media tool that facilitates a higher-level interactivity to its users.

When it comes how Citizen Designers would acquire their agency through their involvement in LMS interface design, Citizen Designers emphasized the cross-cultural technology design approach in a Blackboard interface design since it would create favorable online environments. They thought that these favorable online environments would help them acquire their agency and provide a platform to practice writings. Therefore, they firmly believed that cross-cultural technology design approach would incorporate cultural and linguistic norms and values of users from various backgrounds. Further, they believed that this particular approach in LMS design in general and Blackboard interface design in particular would play a tremendous role in making LMS users visible socially, culturally and linguistically. They pointed out that this particular user visibility in terms of form also ensured equal say among LMS users. As a result, LMS users from peripheral cultural and linguistic backgrounds would not feel alienated in LMS online electronic environments.

Most importantly, Citizen Designers believed that their involvement in LMS design process would help them maintain their cultural and linguistic norms and values in the LMS interface design. This particular user involvement in the Blackboard interface design would help them visible in LMS interface as LMS users from peripheral cultural and linguistic backgrounds. Further, Citizen Designers could exercise their design skills and design decisions. This process

would not only include Citizen Designers in the LMS design, it would also help them include other users from various cultural and linguistic backgrounds.

Over all, Citizen Designer responses indicated that current LMS design is not inclusive, and LMSs can be developed into cross-cultural platforms to include LMS users from various cultural and linguistic backgrounds. Most importantly they indicated that either it was necessary to provide customizing opportunities to the LMS users or they had to be involved in the LMS design process. In this way, Citizen Designer responses support my research question i.e., how Citizen Designers acquire their agency in a cross-cultural digital contact zone through their involvement in the LMS interface re/design.

After discussing Citizen Designers' perceptions towards current LMS interface design and how they would re/design LMS interfaces for a cross-cultural digital contact zone, I attempt to relate Citizen Designer responses on acquiring agencies through their concrete interface design activities in Chapter 6. I analyze their interface designs using activity theory, articulations, genres and issues related to affordability in Chapter 6, and I conclude it with how this design activity or knowledge would enhance Citizen Designer writing besides helping them acquire their agency in a cross-cultural digital contact zone.

## **Chapter 6: Analysis of Citizen Designer web interface designs**

### **6.1 INTERFACE DESIGN AND DESIGNER AGENCY: AN OVERVIEW**

The current Blackboard interface design seems to be neutral and universal, and it also assumes a universal user even for writing classrooms in a cross-cultural digital contact zone. The notion of creating a universal user is problematic, however, because it tends to create a single representative user and ignores the fact that different users have different needs. This user approach can have many negative consequences such as “disregarding some types of users, inhibiting other user types from becoming users, disadvantaging periphery users, and blending what variety does exist into universals, which decreases the resulting usability” (Bowie, 2009, pp. 135-136). In this way, current Blackboard interface design does not include users from peripheral cultural and linguistic backgrounds. In order to avoid this sense of exclusiveness in terms of design, it is necessary to consider a universe of different users instead of creating a universal user or universal technology.

After presenting data and Citizen Designer responses to my three major research questions in Chapter five, in this chapter I analyze interface designs in order to discuss how Citizen Designers would acquire agency through their design activities in a cross-cultural contact zone in this chapter. As I have stated already my three major research questions are: how Citizen Designers perceive LMS interfaces; how would Citizen Designers re/design an LMS for a cross-cultural contact zone; and, how they would acquire their agency through the re/design of LMS platforms in a cross-cultural contact zone respectively. The question I attempt to deal with in this chapter is as follows:

How do Citizen Designers acquire their agency in a cross-cultural contact zone through their interface design activities?

As the question above indicates I focus mainly on the third major question in Chapter five i.e., How would Citizen Designers' participation in LMS interface design help them acquire their agency in a cross-cultural digital contact zone? While answering this question I will support my discussion with an analysis of interface design by Citizen Designers. Because Citizen Designers with peripheral cultural and linguistic backgrounds may feel alienated due to their exclusion in a so-called neutral/universal LMS interface design approach (as my empirical study indicates), I focus my discussion on how Citizen Designers' participation in LMS interface re/design helps them acquire their agency in cross-cultural contact zone situation, and my discussion on their acquiring agency will be limited to their exercise of design decisions. Therefore, I emphasize the cultural and linguistic identity of designers and incorporation of designers' cultural and linguistic norms and values in their interface design activities.

## **6.2 WEB INTERFACE DESIGNS AND THEIR ANALYSIS**

After the usability test of online environments detailed in Chapter 5, I asked research subjects, who are referred to as Citizen Designers in this study, to re/design interfaces to make them cross-cultural platforms. In other words, I asked how Citizen Designers would maintain their cultural and linguistic norms and values as well as include other users from different cultural and linguistic backgrounds in their design process. I informed them that they didn't need to create any special website/interface using professional website builders that require special technological skills. For this, they created website as a part of their writing assignment using free website builders such as webs.com, weebly.com, wix.com and other free web builders. Designing a(n) e-portfolio or professional website was one of the major assignments for First-Year Composition and upper-level writing courses. I asked them how they would re/design an interface that would include users/visitors from various cultural and linguistic backgrounds in

order to make their websites cross-cultural platforms in the process of designing their e-portfolio or professional website as a part of their course assignment.

After re/designing their website, they provided me a link for analysis. Since they designed interfaces in a cross-cultural contact zone context of writing classrooms, I gave a great emphasis on how they re/designed interfaces as cross-cultural platforms in order to make themselves visible in the contact zone as well as included other users from different cultural and linguistic backgrounds. I examined how they re/designed their web interfaces as cross-cultural platforms and how they tried to ensure user interactivity with their website in the contact zone.

### **6.3 MAINTAINING CULTURAL AND LINGUISTIC BACKGROUNDS THROUGH DESIGN ACTIVITIES**

Most of the Citizen Designers situated their websites according to the need of their assignment i.e. advocacy. Based on their research interest, the Citizen Designers were asked to choose a particular theme/social problem as a part of their semester topic to explore from the beginning of their semester, and they focused on their semester theme while designing their websites. Their websites illustrate how individual users articulated myriad of contextual, cultural, and linguistic factors into use as they created their websites in their effort to develop them cross-cultural platforms. The situatedness was guided by the nature of their assignments, the area/topic of their research and their aim for a cross-cultural platform. Hence, Citizen Designer website designs were influenced by immediate and material contexts, varied communities, and broader sociocultural contexts. These factors play important roles in determining how websites in general and interfaces in particular are designed, used and consumed in a particular context such as cross-cultural digital contact zone of FYC and upper level writing courses.



Immediate contextual factors come from designers' life situation particularly the academic life since Citizen Designers designed their websites as a part of their FYC or professional writing courses such as Technical and Workplace writing. Their academic life is an articulation of all other aspects of life since it cannot be separated from other relations they have had in their lives. Their areas of research interests are directly/indirectly influenced/guided by their social and cultural life.



Figure 6.1: Screenshot of User Interactivity

In Figure 6.1, Citizen Designer 5, an FYC student, designed her website advocating for technological literacy for college writing practices in this digital global world. Even if the visual she selects for her website looks neutral, it is particular and appropriate to the discourse community that FYC writing students belong to. Student interactions with the machine in the

visual are influenced/guided by their interactions with each other from different cultural and linguistic communities. The student activities in the visual indicate writing students are active and multitasking, and they like to have a higher-level of interaction with technology including an LMS. With this higher-level of interaction of with technology including an LMS, they like to experiment with their everyday cross-cultural and multilingual practices in their design activities. She has chosen an appropriate visual for advocacy on technological literacy. Even if one cannot read English, the visual clearly tells him or her about what she has been advocating for through her website. The use of the visual and her justification about the relevance of her topic is very important. Besides the welcome text and visual, visitors can see what different pages the designer has created in her website. There are pages such as “About Me,” “Assignments” and “Reflections” that not only inform what she has done as a part of her course, but they also show how her academic life is related to so many different aspects of her social, cultural, and linguistic lives. Further, through these different assignments and pages, she has practiced different genres in an online environment. Besides practicing both traditional genres in the form of her different course assignments, she also practices new and multiple genres while writing about herself on the web and reflecting on her life as a writer. Further, through these different activities, she appropriates technology according to her need and purpose. With these personal, social and academic activities on her website, she moves beyond limitations of current Blackboard interface designs as the Blackboard does not provide these activities to its users now. These user activities encourage users to manipulate technology for their benefit. She exercises her rhetorical power while designing the interface the way she likes. It plays a great role in acquiring her agency in cross-cultural contact zone situation. Most importantly, her interface design foregrounds the

notion of interactivity i.e., the technology users like to have higher degree of interactivity, and this higher level of interactivity helps them affect technology design.

Similarly, Figure 2 below is another example of how Citizen Designer website designs have been influenced by their immediate contexts. Like the designer of Figure 1, Citizen Designer 6, an FYC student, also gives emphasizes his semester advocacy. He has chosen a scientific topic i.e., cell research, and discusses how this particular research helps people become aware of different diseases. Being a science major, he utilizes his design decision to deal with cell research among many other articulations.

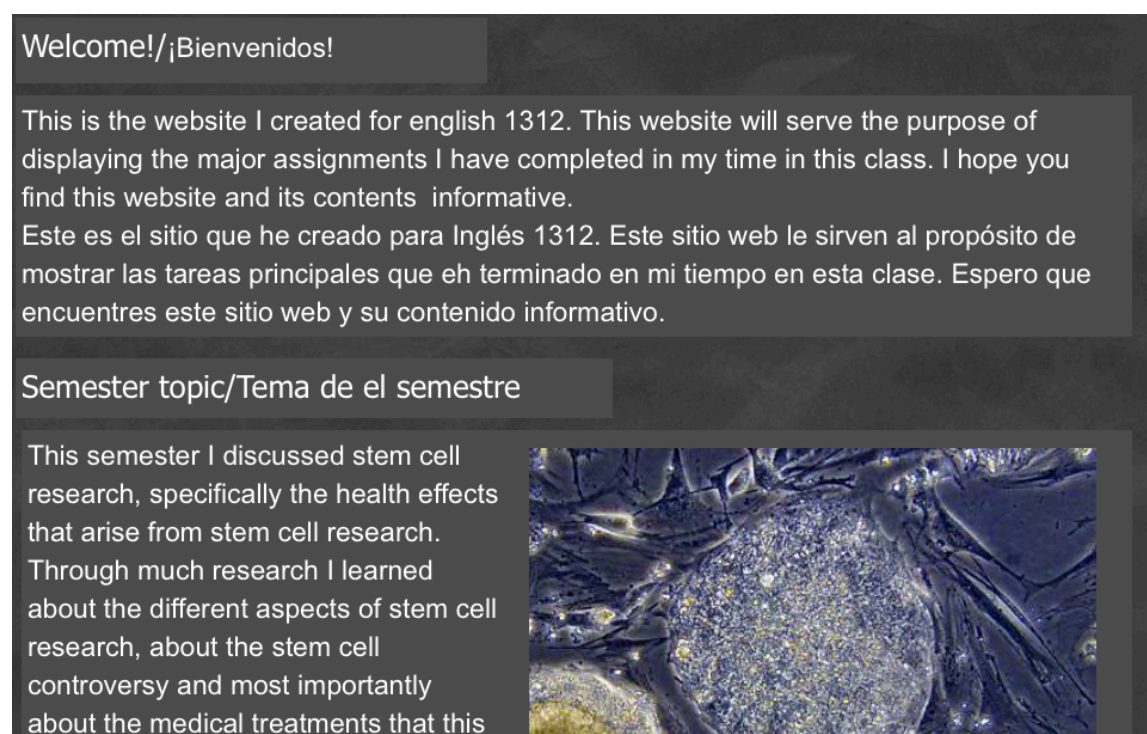


Figure 6.2: Screenshot of Cross-Lingual Website

Despite the neutral/scientific subject matter, the designer has made this website contextual and specific. Instead of using English only, the designer uses the Spanish language thinking that he will have visitors from Hispanic community since the designer comes from US-Mexico border. In order to include his visitors both from dominant and marginal communities, Citizen Designer

6 uses both English and Spanish so that both types of visitors benefit from this website visit. That way, both Spanish and English speakers are acknowledged, and they feel represented in a technology design. This particular interface design is guided by a particular context and users/visitors in a discourse community. Further, the designer uses his decisive power in the design process, and it helps the designer acquire his agency in the cross-cultural contact zone. Like the designers of the above web interface designs, other Citizen Designer interface designs are influenced by their immediate and material contexts. At the same time, Citizen Designers have included users/visitors from various social, cultural and linguistic backgrounds. Most importantly, they have utilized their design decisions in designing their interfaces the way they like. This particular utilization of their design decision has played a great role in empowering them as technology users/consumers.

#### **6.4 INTERFACE DESIGNS AND THEIR DIFFERENT RELATIONSHIPS**

Further, Citizen Designers established as well as maintained relationship between their cultures and technology through their interface design activities. While doing this, Citizen Designers have emphasized their daily life practices and their influence on interface design and use. This relationship has added something to the individual design activities by bringing signifying practices and developmental perspective into the articulation of individual user experience as cultural consumption in a globalization age. Similarly, this relationship illustrates how individual Citizen Designer design activities are influenced by web design principles in general and contextual design activities in particular. Further, this relationship shows how ideological elements come to cohere together within a discourse as well as provide a way of asking how they do or do not become articulated.

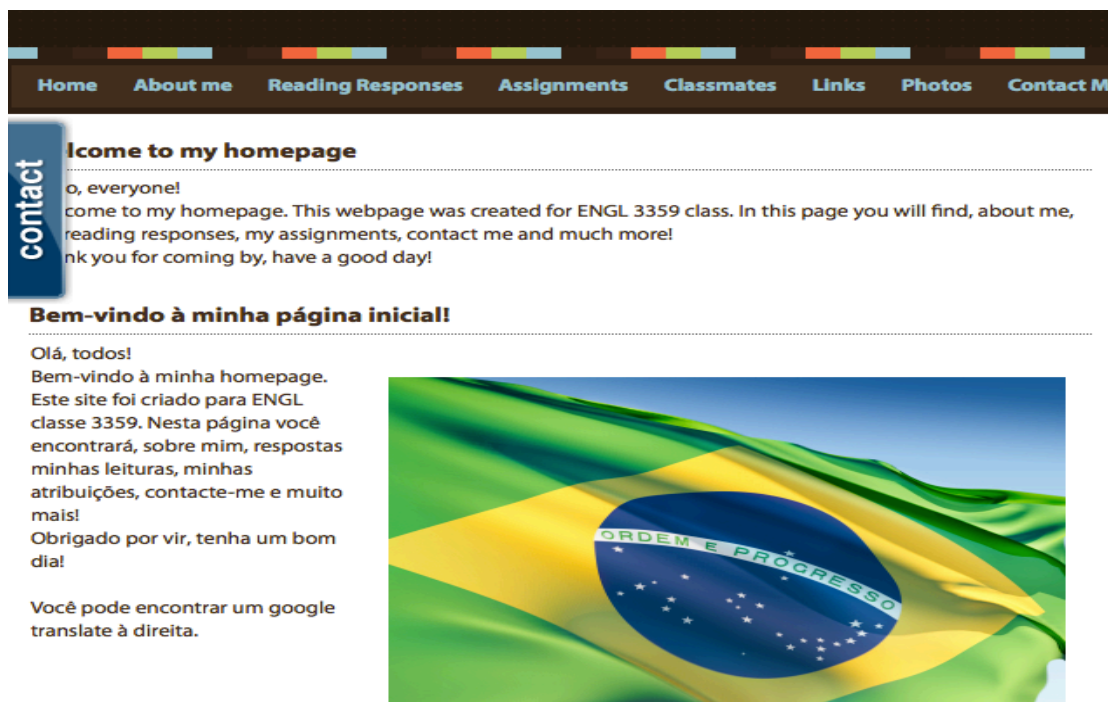


Figure 6.3: Screenshot of Citizen Designer Webpage

In the figure above, the Citizen Designer 9, a Technical Writing student, uses standard interface design technique with a tool bar where there are names for different pages she has created and welcomes her visitors using English language. However, her interface design activity is not limited to English. She also uses the Portuguese language to address her Portuguese visitors. Similarly, she uses a flag of her country (Brazil) to particularize or represent her everyday life as a writing student in a cross-cultural contact zone situation at UTEP. The flag here stands for her country and culture as well as language she speaks as a first language. Use of English as one of her languages stands for the language of her academic life. These uses of different languages and visuals in her interface design are examples of cross-cultural technology design that include users from various cultural and linguistic backgrounds. Similarly in Figure 6.4 below, Citizen Designer 16, a Workplace Writing student, connects his everyday life with his interface design

activity.



Figure 6.4: Screenshot of Designer and Different Relationships

Citizen Designer 15 besides representing himself as a student through the portfolio, also represents himself as a professional web/graphic designer. In this case, the interface designer merges both student and professional life through the design of web interface, and he shows how relationships are established and influenced by each other in the designer's everyday life.

These different relationships between individual, society, cultures, users and technology establish the subject position of designers in the above figures. Designers have been able to maintain their periphery position despite following the dominant system of web interface design. Citizen Designers introduce themselves as individual beings through their design activities, use of cultural signs, professional backgrounds, and nationality. Further, the relationships between and among different factors such as users, their cultures and technologies also empower designers since their individual/group affinity to periphery cultural and linguistic backgrounds

help them challenge their stereotypical representations. Their act of representing themselves as people from marginal cultural and linguistic backgrounds present them as powerful agents who can challenge traditional way of representations in technology design. It helps them create their own identity since it enables them to think how this ideology empowers them without reducing those forms of intelligibility to their socio-economic or class location or social position.

Similarly, Citizen Designers contextualize those different relationships in their interface designs in a cross-cultural digital contact zone. The design context was a great source for them to realize the possibilities of remaking contexts through cultural alliances and apparatuses. Web tools in general and cultural use of these tools helped Citizen Designers achieve their goals in making themselves visible in the contact zone. These relationships help them realize how contexts are made, unmade, and remade. As a result, Citizen Designers have created different contexts or challenged traditional web design contexts in which periphery voices have not been represented. Similarly, articulations are dynamic and change over time, and articulations help Citizen Designers study relationships among different entities in a large structure. The design context further helps Citizen Designers understand the unequal distribution of agency and power in networks.

## **6.5 CULTURALLY LOCALIZED DESIGN ACTIVITIES**

Citizen Designers established themselves as invaluable members of their communities in general and discourse communities in particular in a cross-cultural digital contact zone through their design activities. Communities are formed through research interests, social circles, assignment topics and themes, classmates in the writing classroom, and physical locations. During the interview and website design phases of this research, this sense of community or discourse community played an important role. Citizen Designers raised the US-Mexico border

issue at UTEP forcefully whether in terms of democratic online environments or website interface design by themselves for cross-cultural digital contact zone. In this case, Citizen Designers from higher-level writing courses such as Technical and Professional Writings were more critical in than FYC students. Being advanced students at UTEP, a border university, they forcefully advocated for the acknowledgment of discourse community members' social, cultural, and linguistic norms and values by the website designers. This sense of discourse community encouraged Citizen Designers to include members from various cultural and linguistic backgrounds in the interface design process. The users found themselves represented/included in the interface design through the acknowledgement of their culture or language.



Figure 6.5: Screenshot of Members in a Discourse Community

The figure above foregrounds this sense of discourse community with the help of language use and other cultural signifiers. In Figure 6.5, the Citizen Designer 15, a Workplace Writing student,



chooses a visual and words that address the cultural and linguistic norms of members in their discourse community. She tries her best to bring appropriate language and representation of discourse community members in the visual addresses the cultural and linguistic norms and values of her discourse community members or visitors. The Figure above supports the notion of creating/designing technology according to its users or discourse community members. As a result, the members in the discourse community are invited to feel themselves included/acknowledged in the interface design.

In the examples above, Citizen Designers have culturally localized the interface design process in order to provide users/viewers a culturally localized user experience in a cross-cultural contact zone. This act of culturally localizing interface design in a cross-cultural contact zone gives users/viewers from various cultural and linguistic backgrounds a holistic user experience when their individual design activities are integrated with their meanings to different users/viewers. As a result, the users/viewers in the contact zone are provided with an opportunity to experience how a localized technology design looks like. It helps them feel recognized/acknowledged in the technology design process. In this context, interface design undergoes a dual mediation process, and it meditates both instrumental practices as well as socio-cultural meanings. Further, user/viewer experience is founded through this mediation. User experience is mediated in the interface design process that includes tool-mediated production and sign-mediated communication. For example, the Citizen Designer in the Figure 3 above creates a cross-cultural discourse community as a whole by mediating different users/viewers from various cultural and linguistic backgrounds, and how they are supposed to function in a contact zone. On top of all these things, the interface designers establish themselves as members of their

community. This sense of belongingness helps them create their cultural and linguistic identities in a cross-cultural contact zone.

Citizen Designers utilized this dual mediation successfully in their interface design in a cross-cultural digital contact zone situation since it assumes structured affordance as a result of dialogic interactions and dialogic interactions enacted through use. Further, dual mediation took affordances as the outcome of dialogic interactions between technology, user, and activity. Citizen Designers used it to locate user needs and prioritize design goals in the design process. This particular interface design approach was very useful for cross-cultural technology design because it began with the exploration of user activity in context and continues to design according to user life styles. This particular approach in interface design treated design as both problem solving and engaged conversation that helped interaction between technology and users, technology and its surrounding local conditions as well as the local and the global, and designers and users. Similarly, it promoted the notion of contextual technology design as opposed to universal technology design. It got its momentum with constant interactions and ongoing dialogic relationships. These dialogic relationships between users and technologies played crucial roles in creating meaningful user experiences extending the interface design as problem solving to engage conversation in this age of participatory culture.

## **6.6 DESIGNER/USER AGENCY THROUGH CONCRETE INTERFACE DESIGN ACTIVITIES**

When Citizen Designers realized that current Blackboard interface does not allow a high level of interactivity with the technology or customizing opportunities to its users because it is instructor- and content-oriented in nature, they re/designed their user interface interactive by putting the blogging tool or their contact information on their websites. The current module-based Blackboard interface design provides functional empowerment to its users once users from

various cultural and linguistic backgrounds familiarize themselves with the universal Blackboard interface design approach. However, this Blackboard interface cannot provide democratic empowerment through higher levels of interactivity and customizing opportunities for its users. Blackboard users cannot directly modify Blackboard interface, and Blackboard users are unable to represent themselves as valuable members of the writing classroom in terms of Blackboard design. As a result, Citizen Designers do not have an opportunity to steer their participation for the better integration into local geophysical communities as Dohney-Farina (1996, p. 123) suggests. There is not an opportunity of any substantial interactivity other than users creating their short biography and contributing to a discussion thread created by their course instructor in the current Blackboard interface design. Current Blackboard users do not have any democratic user activity that provides them a decisive power in operational, organizational and technological change (Blomberg et al, 1997, p. 281). Citizen Designers realized these democratic and user empowerment factors and tried to utilize them in their interface design process. In Figure 6.6, the Citizen Designer 20 has put a blog in order to make it more interactive.

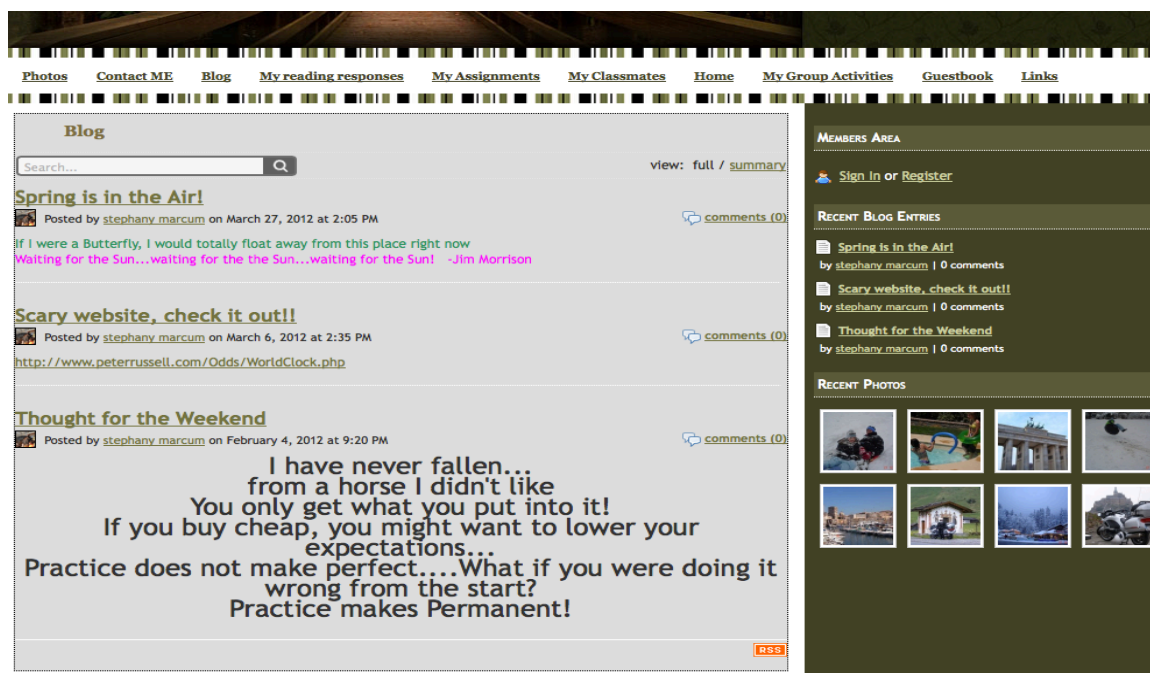


Figure 6.6: Screenshot of a Blog

In Figure 6.6, Citizen Designer 20 seeks to get viewers' feedback through the installation. What the Citizen Designer does in the figure above does not represent expert design activity in the direction of higher user activity or empowering users. However, this act of installation of blog on her website can be a great lesson for user interactivity and customizing opportunity. Further, even if it looks very simple, it has a great insight in the direction of designing technology for higher user interactivity and providing some design/customizing opportunities to the users, particularly in a cross-cultural digital contact zone situation. Blog allows website visitors to express his or her ideas with the use of words/text as well as other means. This particular focus on conversation between and among users/visitors promotes the sense of empowerment, negotiation and multiple participants.

These Citizen Designer concrete design activities are very meaningful and tell about users' actual goal of using a particular technology such as the Web. Most of the time, instead of using those readymade web templates designed by professional Web developers, the users will appropriate them according to their needs, purpose and context. These design acts hold great significance, and they indicate that the designers have been able to address their cultural and linguistic needs. It shows that Citizen Designers do have different needs and goals in the use of technology in different contexts.

To achieve above discussed design goals, Citizen Designers used technology as an object to perform activities in a particular context. They used web technology as an object to create online cross-cultural and cross-lingual communities for the US-Mexico border. In doing so, Citizen Designers were mindful of acknowledging cultural and linguistic norms and values of discourse community members in the contact zone. For that, they look at a tool or artifact that

represents a materialized activity that has been created and transformed during the development of the activity itself, as a result, it carries with it a particular culture-a historical residue of that development.

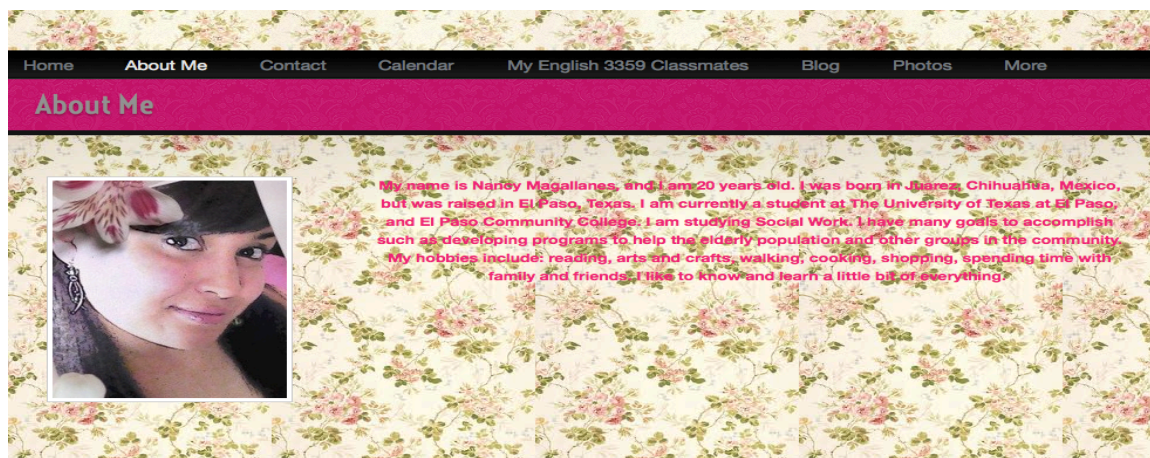


Figure 6.7: Screenshot of Personalized Webpage

For example, Citizen Designer 8 in the figure above introduced herself as a person from a certain cultural and linguistic background through her interface design. Citizen Designers developed their websites as their cultural artifacts that reflect their cultural and linguistic norms and values. Citizen Designers also tried their best to recognize other cultural and linguistic norms and values of other discourse community members through their interface design activities. Websites as tools and the cultural use of tools shaped external individual activity through the process of internalization. Their websites reflected what is in their mind and how they view other discourse community members.

Most importantly, Citizen Designers design activities are object-oriented and tool-mediated processes in which actions are mediated through the use of artifacts (including tools and language) to achieve a transformative objective. Citizen Designers seek to achieve some sort of user outcomes by re/designing user interface the way they like since the interface as a cultural

artifact functions as a mediator in achieving their goals. As a mediation tool or a process, a web interface helps them shape their experiences through the use of web tools and sign systems.

Citizen Designer concrete interface design activities and/or use of technology, cultural signifiers, use of language on the other hand help them develop the Web as a cultural and linguistic tool since it helps them express their cultural and linguistic goals through the use of the Web. From this perspective, technology in general and an LMS interface in particular is developed into a cultural artifact. LMS interface re/design helps Citizen Designers articulate their cultural and linguistic norms and values. It makes them visible in the cross-cultural digital contact zone situation where most of the time they remain invisible. Like other artifacts, this use of web as Citizen Designers' cultural and linguistic artifact helps Citizen Designers achieve cultural and linguistic identity.

Citizen Designers used web user interfaces as artifacts that have been created and transformed during the development of the activity itself, and web as an artifact carries with it a particular culture- a historical residue of that development (Kuutti, 1996, p. 27). Instead of designing their interfaces as neutral and universal tool that directly or indirectly recognizes dominant cultural and linguistic norms and values, Citizen Designers designed their interfaces recognizing cultural and linguistic norms and values of their discourse community members. At the same time, they re/design web according to their needs and purpose, and they change it into cross-cultural and cross-linguistic platforms. In this process, the Web has been transformed into a negotiated space.

As a result, the Web as a mono-cultural and monolingual tool that recognizes dominant culture and language now incorporates the periphery cultural and linguistic norms and values in

the process of web use/development by Citizen Designers in a cross-cultural and cross-linguistic digital contact zone of First-Year Composition classroom.

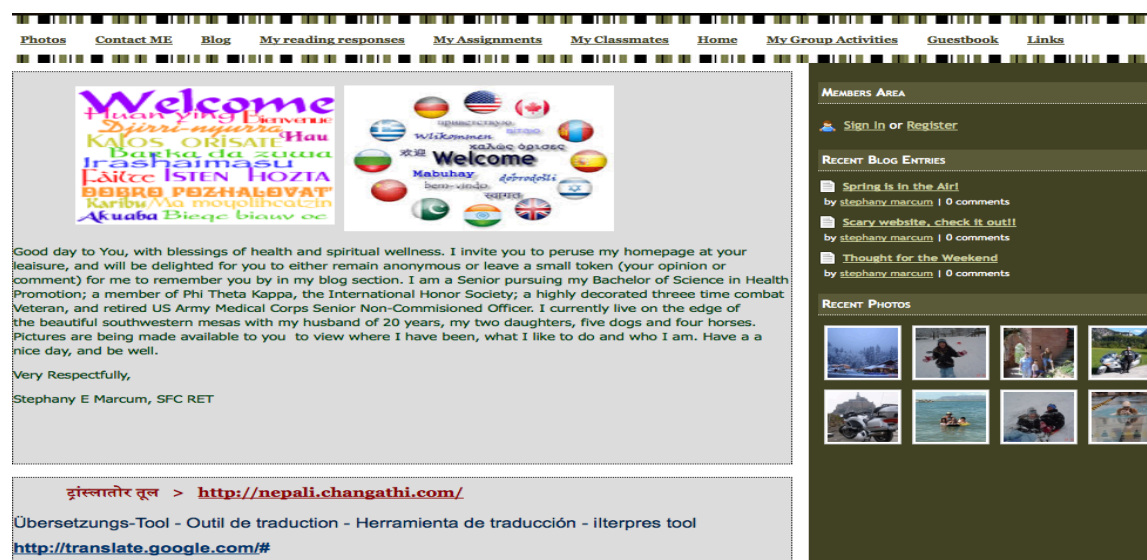


Figure 6.8: Screenshot of User Inclusive Webpage

In Figure 6.8, Citizen Designer 20 designed interface as an artifact that is socially, culturally, and historically influenced. Because systems of artifacts must be designed in ways that address the needs of all the participants in the situation and help them all move toward roles and ways of thinking appropriate for an alternative approach, the designer has tried to achieve all these through her interface design.

## 6.7 ESTABLISHING CULTURAL AND LINGUISTIC IDENTITY THROUGH TECHNO-CULTURAL CONSUMPTION

Citizen Designers used Web technology to advocate their social, cultural and linguistic interests/affiliations through their interface design activities. This use of technology for the advocacy of social, cultural and linguistic agenda is known as cultural consumption. In doing so, they continue technology production in their own way incorporating their individual design acts and cultural signifiers. As a result, meaning is constructed actively through their interface design.

This is the process of designing digital interface as the creation of artifact itself. On the other hand, this act of consumption is the articulation according to cultural studies. Similarly, it is related to identity formation from the postmodern point of view in which the identity is under construction or it is very much an act of assemblage. The identity keeps on changing according to the assemblage the designer brings into the interface design process. In this process, Citizen Designers present themselves not merely as passive users of technology, rather, they present themselves as active technology designers and meaning makers who appropriate technology according to their needs and context.

In re/designing interface by consuming it, Citizen Designers are constantly involved in a dialogic way of meaning creation. They question their identity and representation created by technology designers. Their interface design activities foster double articulation as they illustrate how meanings of interactive technologies are circulated and generated on a cultural circuit as a dynamic process (Silverstone & Haddon, 1996, p. 62). The first articulation arises through the relationship among objects in which technologies are articulated through technological production, marketing and use, and discourses surrounding them. For example, Citizen Designers challenge the their identity, representations, and original meanings through their design activities for the production of a new meaning. This act of creating new meaning with design activities comes as another articulation when they use their interface as a communicative tool in the process of their technology consumption. Here the first articulation is the cause of their second articulation, and meaning production is itself the result of users' technology use to fit their cultural and linguistic norms and values in the cross-cultural digital contact zone. Hence, their interface design activities help them acquire their agency through their design activities.



They question their established identities and create their identities through their design activities.

## **6.8 DESIGNER/USER AGENCY THROUGH TECHNOLOGICAL AFFORDANCE AND MEDIATION PROCESS**

Citizen Designers designed interface in the cross-cultural digital contact zone as a negotiated space. As a result, Citizen Designer interface designs are not simple/universal/neutral spaces, rather, they are complicated ones because of their effort in making their websites cross-cultural and cross-lingual platforms. They look complicated because they make viewers/visitors aware of technological and cultural hegemonies in the universal/neutral interface design process. For example, most of the interfaces for my analysis use alternative ways of designing interfaces where English is not a default language. By this, I mean to say that the Citizen Designers instead of trying to make websites neutral platforms, Citizen Designers have contextualized their websites according to the discourse community they are in. Similarly, instead of using English as the only language, they have shown the possibility of other languages in the interface. As a result, affordances are the result of action and meaning mediated through technology use and interaction becomes mediated properties. Even if their interface design approach may not promote functional empowerment as it is facilitated by current Blackboard interface design, their design approach definitely promotes democratic empowerment.

Citizen Designers' interface designs tried to solve problems that are often prevalent in the current Blackboard interface design that ignores cultural and linguistic norms and values of the users/visitors and limits users from a higher level of interactivity with Blackboard. Citizen Designers exploited the notion of perceived affordance in their design by incorporating the use of cultural and linguistic signifiers to help their visitors produce meaning with their design in their

interface design activities. Citizen Designers' use of perceived affordability is equally related to create a familiar environment to the users/visitors since it helps their users/visitors understand possible action made possible by an artifact in use and associate the artifact with practices. Similarly, the use of blogs in their websites promotes the sense of a higher-level interactivity with the technology, and it provides the user/visitor an opportunity to contribute from their side. These and other user activities have helped Citizen Designers acquire their agency in a cross-cultural contact zone as well as acknowledge/recognize cultural and linguistic norms and values of users/visitors in the process of their interface design.

After analyzing how Citizen Designer would acquire their agency through interface design activities in a cross-cultural contact zone, I discuss how their interface design activities would help them enhance their writing through the creation of favorable electronic environments in Chapter seven.

## **Chapter 7: Interface design and its contribution to student agency and writing**

### **7.1 SUMMARY OF INTERFACE ANALYSIS**

In this study, Citizen Designers developed their web interfaces as cross-cultural platforms in the process of re/designing their e-portfolio or professional websites as a part of first-year or advanced writing course. Their interfaces illustrated myriad contextual, cultural, and linguistic factors in their effort of developing their websites as cross-cultural platforms. The nature of their assignments, the area/topic of their research and their impulse for a cross-cultural platform and their own cultural and linguistic backgrounds played a great role in their interface re/designs. Citizen Designers established themselves as valuable members of their discourse community in a cross-cultural contact zone in the process of designing their websites. Most importantly, Citizen Designer interface designs highlight the importance of designing websites in general and LMS in particular according to users and contexts in a cross-cultural digital contact zone and/or providing higher level of interactivity with the technology or users themselves in order to promote active learning in contact zone.

Citizen Designers maintained their cultural and linguistic norms and values as well as included other users in a contact zone by designing their websites according to the context they are situated in. They included users from various cultural and linguistic backgrounds though the use of different languages such as Spanish and other cultural signifiers such as images of people, national symbols and other artifacts. Citizen Designers established their subject positions through the use of language and cultural signifiers that belong to them as well as other users in a cross-cultural digital contact zone. The relationships between individual, society and cultures helped Citizen Designers realize the possibilities of making, unmaking and remaking contexts. They could deconstruct the techno-cultural hegemonies through their alternative approach of interface

design. The subject position they acquired through their interface design activities empowered Citizen Designers as powerful agents of their respective cultures in a cross-cultural digital contact zone.

Using activity theory to analyze Citizen Designer interface design activities, articulation theory to explore meaning making process through the use of cultural signs and genre theory to link concrete design acts and cultural signifiers as well as to explore relationship between interface design and student writing, I conclude that Citizen Designers should be invited to design LMS interface in a cross-cultural contact zone. Activity theory illuminated the mediation of action in Citizen Designer interface designs and articulation theory examined the mediation of meaning whereas genre theory linked the two mediation processes together. Activity theory helped to analyze interface design by Citizen Designers as it “posit(ed) that in every sphere of activity, collaborators use instruments to transform a particular object with a particular outcome in mind” (Spinuzzi, 2003, p. 37). The notion of articulation added to the meaning of individual design activities by bringing signifying practices and a developmental perspective into the articulation of LMS user experience as cultural consumption in cross-cultural digital contact zone. Further, articulation helped to understand interface as an artifact with certain design feature that functions as an assemblage of articulations between different factors such as user goals and users, between technical functions and cultural meanings, between work efficiency and lifestyle choice, between design and production, between designer’s culture and user’s culture, and so on. Genres came to act as a mediator between design activities and cultural signifiers, and genre created meaning out of those individual design activities and cultural signifiers relating them to social motives motivated by purpose.

Citizen Designer responses and interface designs supported that Citizen Designers acquire their agency through their LMS interface design activities. In their responses and interface designs, Citizen Designers emphasized the importance of situated design for a cross-cultural digital contact instead of universal design. According to them, situated design addresses user needs in a cross-cultural digital contact zone in comparison to universal design that tries to homogenize user needs ignoring those differences. Similarly, Citizen Designers are able to question and deconstruct those techno-cultural hegemonies through alternative design approaches. Instead of following a universal technology approach, they followed culturally localized design. They try their best to provide their users with higher-level interactivity through blogs, discourse community, language use and other cultural signifiers. Most importantly, their design efforts contribute to the creation of favorable electronic environments that crucial for user agency and enhancement of student writings.

## **7.2 CITIZEN DESIGNER AGENCY THROUGH LMS INTERFACE DESIGN**

With the participation of Citizen Designers in LMS interface design, they represent a materialized activity that has been created and transformed during the development of the interface design when Citizen Designers are invited to re/design it. As a result, LMS interface carries with it a designer's culture- a historical residue of that development (Kuutti, 1996, p. 26). Citizen Designers acquire their agency when they direct their conscious awareness toward the user interface that concerns the nitty-gritty of their design activities (Nardi, 1996a, p. 13). Citizen Designers are empowered when they acquire agency through their design activities in a cross-cultural digital contact zone. Genre emphasis upon function directs attention to tasks and actions. As a result, design tasks and actions and meaning creation in a cross-cultural contact zone are blended together.

Besides Citizen Designers acquiring agency through LMS interface design in a cross-cultural contact zone, LMSs platforms will be transformed into cross-cultural platforms that create spaces to all the members in a discourse community. As a result, LMSs will provide writing students with active and personal learning environments through student experiences and interactions within a learning environment (Papastergjou 2006). Citizen Designers' participation in LMS interface design in a cross-cultural contact zone can play a great role in empowering them so that they could exercise their design skills in creating inclusive online environments for users from various cultural and linguistic backgrounds. Their participation in interface design also plays a substantial role in deconstructing center/periphery relationship since interfaces are gateways to creating new relationships between Citizen Designers and universities. These new relationships between Citizen Designers and university can promote peripheral student agency through the recognition of their social, cultural and linguistic norms and values. Citizen Designers' participation in LMS interface design also plays a great role in creating LMS online environments as favorable electronic environments for users from various cultural and linguistic backgrounds.

### **7.3 STUDENT AGENCY AND WRITING IN ELECTRONIC ENVIRONMENTS**

Citizen Designers used interface as electronic environments to express the shared expectations of form and content of the interaction in their website through the use of electronic environment as genre since genres are communication patterns created by a combination of the individual, social and technical forces. Their website helped them to express their social motives since they are bound by their respective cultural contexts in the cross-cultural contact zone. Interface Designs and collaborations in a Cross-Cultural Contact Zone. When the online environments used in the writing classroom are designed by Citizen Designers, they are

transformed into highly interactive platforms since this high-level interaction with the system guarantees their input in the technology design. As a result, users become active collaborators in the cross-cultural digital contact zone. This particular collaboration helps Citizen Designers establish a dialogical relationship between them and technology, and this dialectical relationship works as “the method of discovering and communicating truth” and the rhetoric the Citizen Designers use is “primarily concerned with the provision of inventional devices whereby the speaker may discover his or her argument, with these devices naturally falling into three categories: the rational, the emotional, and the ethical” (Berlin, 1982, p. 768). According to Berlin (1982), “[t]ruth is dynamic and dialectical, the result of a process involving the interaction of opposing elements. It is a relation that is created, not pre-existent and waiting to be discovered” (p. 774). As a result, Citizen Designers create their subjectivity through their interface design activities since “the subject is considered the construction of the various signifying practices, the uses of language, of a given historical moment” (Berlin, 1992, p. 18). The Citizen Designers are encouraged to resist and negotiate the hegemonic discourse and involve themselves in more democratic practices. This particular act of resisting and negotiating the hegemonic discourse in interface design can play a great role in enhancing their writing practices since writing is also involves negotiation based on audience, purpose, context, and medium among other rhetorical strategies. Most importantly, this particular dialectic interaction prepares writing students as critical citizens for a democratic society on the one hand, and it promotes their active learning on other hand.

Citizen Designers’ use of electronic environment as genre to express their social, cultural and linguistic agendas equally helps users/viewers understand technology better in social and historical context. When a genre comes as a mediator between activity theory (the mediation of

action) and articulation (mediation of meaning), it links the two mediation processes together. For example, their act of interface design and their use of different design patterns and languages are mediated through the electronic environments they create. Their electronic environment as a new genre is solidified different other genres both new and old within this environment. “Welcome” and “About Me” may work as new genres within the electronic environment whereas different assignments such as writing essays stand for their traditional genre practices. Their use of genre explores how action is solidified in meaning-carrying generic features through a structuration process. Individual motives in the form of cultural and linguistic purposes, or individual design motives, are similar to objectives on the activity level in activity theory. From this perspective, genre is similar to activity since genres are specific human activities and performances of recognized social motives. Genres are motivated by purpose. Genre emphasis on function directs our attention to tasks and actions. As a result, design tasks and actions and meaning creation in cross-cultural digital contact zone are blended together.

When interface is taken as a space for interactions between the users and systems, these interactions help the users generate new kinds of writing and texts when they make a connection with the powerful and innovative ways of composing and communication. With this, there is an evolvment of new genres in a form of interface that function in large and hegemonic way because these genres “proliferate and circulate across systems of media and activity because the amorphous, open terrain of electronic environments position them as unique communicative boundary spaces” (Carpenter, 2009, p. 143). Like genres and texts they generate, interface as electronic environments functions by instantiating and mediating the individual actions and interactions with activity systems by means of a seemingly endless variety of tools-in-use. These



environments operate in a manner of genre function i.e., social and rhetorical framework within which we perform our everyday practices.

The interface as electronic environment promotes the notion of social constructionism that is promoted by cross-cultural collaboration in a cross-cultural digital contact zone, and it can be immensely important to writing students in general and periphery students in particular as they can participate in an active learning process. Writing students will develop critical perspective towards many things including technology since it allows members in the community to share their cultural and linguistic experiences through their participation in a technology design process. Further, cross-cultural collaboration helps them to acquire their agency in a cross-cultural contact zone as well as practice social constructionism in their (digital) writing and research since collaborative learning is firmly bolstered by social constructionism. This notion of social constructionism is equally important while developing LMS into cross-cultural platforms by designing them by the users/participants in a cross-cultural contact zone situation. Because technology and culture are same, social constructionism is useful for deconstructing cultural and technological hegemony through Citizen Designers' interface re/design activities that promote the notion of cross-cultural negotiation in the LMS interface design process. Further, social constructionism promoted by cross-cultural collaboration helps them to acquire their agency in a cross-cultural contact zone as well as practice social constructionism in their (digital) writing and research.

#### **7.4 FUTURE DIRECTIONS**

Involving writing students from peripheral cultural and linguistic backgrounds in LMS interface re/design as a part of writing curriculum and syllabi can be a great way to help them acquire their agency and enhance their writing. This particular act of student

involvement/participation helps them develop critical perspective toward technology design as well as practice their rhetorical power informed by their cultural and linguistic backgrounds in the LMS interface design process. On top of it, it will be best the practice to develop critical perspectives to everything including new media since they have invaded their daily practices. RWS in general and FYC in particular should include these practices as a part of their writing curriculum and syllabi since RWS scholars have been talking about these critical and rhetorical technological literacies for a long time now, however, they have not been able to point out how these notions/concepts can be practiced in everyday writing classrooms particularly in a cross-cultural digital contact zone.

Because writing classrooms in US universities have been cross-cultural contact zones, cultural studies should be used as a tool since it is a version of social construction of reality that believes that reality is a total construction of our social and cultural practices. It is important everywhere as it acknowledges the role of material realities that are being struggled over, articulated, treated as real because of their measurable effects. This materialist view of cultural studies helps writing students understand that new media technologies as cultural artifacts as well as they become aware of how their contexts can be made, unmade, and remade through cultural practices.

Further, cultural studies in relation to writing pedagogy can be equally important in the cross-cultural digital contact zone of writing classrooms since there are students from various cultural and linguistic backgrounds. It is necessary to include students from various backgrounds and acknowledge their cultural and linguistic norms and values in the writing curriculum and syllabi design as well while using appropriate writing pedagogy and pedagogical tool such as LMS. Similarly, the writing instructors should make their writing pedagogy contextual so that it

can embrace student experience in the classroom. It also motivates the teachers to develop curriculum that includes student experiences from different cultural, linguistic, economic, social backgrounds. Further, the inclusive writing curriculum encourages students to bring things from their cultural, social, linguistic backgrounds that can equally help teachers learn from their students. Similarly, inclusive pedagogical knowledge will be invaluable in the selection of digital technology for a writing classroom as well as to transform them to democratic spaces. Most importantly, these practices contribute to creating active learning environments in cross-cultural digital contact zones and promote social constructionism in students writing practices through LMS tools in a cross-cultural digital contact zone since LMSs are great pedagogical tools in this digital global world.

#### **7.5 LMS INTERFACE RE/DESIGN AND THE CONCEPTUAL RELEVANCE OUTSIDE OF THE DISCIPLINE**

LMS interface re/design by Citizen Designers cannot be limited to rhetoric and writing studies. LMS interface re/design by Citizen Designers is equally relevant to a higher education as a whole for the promotion of active and social constructive learning in this digital global world. Universities around the world in general and US universities in particular have been centers for higher education for many international students. These LMS tools are popularly used with an assumption that the online environments created by Web 2.0 technologies create unifying spaces where diverse societies, cultures and linguistics as well as literacies and knowledges associated with them merge together as negotiated space of neutral space. They use Blackboard and other Web 2.0 tools such as Wiki and blogs for the same thinking that they help the participants acquire agency and promote social constructionist learning. However, Panthee (2012) argues that even if Web 2.0 tools are regarded to be

democratic and empowering technologies for their collaborative, participatory and distributive characteristics, but very little is known about how collaborative, participatory and distributive they are” (p. 41). These online environments are, in fact, not “culturally neutral or innocent communication landscapes open to the literacy practices and values of all global citizens” (Hawisher and Selfe, 2000, p. 15). They may alienate the participants from marginal/peripheral social, cultural, and linguistic background and experience because of their disregard to their social, cultural, and linguistic norms and values in the digital contact zone. Therefore, it is necessary to pay attention in the selection of an appropriate LMS tool. It is equally important to involve users from peripheral cultural and linguistic backgrounds in the process of re/designing these LMS tools to include users from various cultural and linguistic backgrounds. Exposing students to these democratic issues in the LMS design can be a practical way of developing critical and rhetorical perspectives in students.

This act of developing critical and rhetorical perspectives through LMS interface re/design can be equally relevant outside the academia in this age of digital media. Web technologies have been inseparable part of our everyday life, and they are impacting our everyday life and activities are guided by these web technologies. Making technology users aware of technology designs help them develop critical perspective towards technologies they use in their everyday life. This awareness towards technology design also helps technology users question their identities in a technology design. Similarly, users question whether they are included in a design of that technology or not. This type of awareness towards technology designs helps them develop critical perspective towards many other social issues in their everyday life. This particular concept of including users in a technology design equally helps technology designers to design technology to address the needs of users from various social,

cultural and linguistic backgrounds in technology design. Most importantly technology design and democratic user empowerment through interface design is transferrable to many other social issues, and it can play a great role in developing critical perspectives towards social issues and creating a democratic society.

## References

- Adams, C. (2011). Learning Management Systems as sites of surveillance, control and corporatization: A review of the critical literature. *Society for information technology and teacher education international conference, 2010(1)*, 252-257.
- Arola, K. L. (2010). The design of Web 2.0: The rise of the template, the fall of design. *Computers and Composition, 27(1)*, 4-14.
- Albrechtsen, H., Andersen, H. H K., Bodker, S., & Pejtersen, A. M. (2001). Affordances in activity theory and cognitive system engineering. Roskilde, Riso National Laboratory.
- Baerntsen, K., & Trettvik, J. (2002). An activity theory approach to affordance. In O. W. Bertelsen, S. Bodker, & K. Kuutti (Eds.), *Proceedings of the Second Nordic Conference on Human-Computer Interaction* (pp. 51-60). New York, NY: ACM Press.
- Bawarshi, A., and Reiff, M. J. (2010). *Genre: An introduction to history, theory, research and pedagogy*. West Lafayette, IA: Parlor Press LLC.
- Bazerman, C. (1997). The life of genre, the life in the classroom. In W. Bishop & H. Ostrom (Eds.), *Genre and writing: Issues, arguments, alternatives* (pp. 19-26). Portsmouth: Boynton/Cook.
- . (2003). Textual performance: Where the action at a distance is. *JAC: Journal of Advanced Composition, 23(2)*, 379-96.
- Bazerman, C., & Prior, P. (2005). Participating in emergent social-literate worlds: Genre, disciplinarity, interdisciplinarity. In R. Beach, J. Green, M. Kamil, & T. Shanahan (Eds.), *Multidisciplinarity perspectives on literacy research* (2<sup>nd</sup> ed., pp. 133-78). Creskill, NJ: Hampton.

- Beauvais, P. J. (2002). First contact: Composition students' close encounters with college culture. In J. M. Wolf (Ed.), *Professing in the contact zone: Bringing theory and practice together* (pp. 21-47). Urbana, IL: NCTE.
- Beebee, T. O. (1994). *The ideology of genre: A comparative study of generic instability*. University Park, PA: Pennsylvania State UP.
- Bellamy, R. K. E. (1996). Designing educational technology: Computer-mediated change. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 123-146). Cambridge, MA: MIT Press.
- Bennett, S. (2011). Learning Management Systems: A review. Report for AUT University LMS group, Auckland.
- Berkenkotter, C., and Huckin, T. (1993). Rethinking genre from a sociocognitive perspective. *Written Communication*, 10(4), 475-509.
- . (1995). *Genre knowledge in disciplinary communication*. Hillsdale, NJ: Lawrence Erlbaum.
- Berlin, J. A. & Vivion, M. J. (1992). Introduction: A provisional definition. In J. A. Berlin & M. J. Vivion (Eds.), *Cultural studies in the English classroom*, (pp. vii-xvi). Portsmouth, NH: Boyton/Cook Heinmann.
- Berlin, J. A. (1982). Contemporary composition: The major pedagogical theories. *College English*, 44(8), 765-777.
- . (1992). Poststructuralism, cultural studies, and the composition classroom: Postmodern theory in practice. *Rhetoric Review*, 11(1), 16-33.
- Bizzell, P. (2002). Multiculturalism, contact zones, and the organization of English Studies. In J. M. Wolf (Ed.) *Professing in the contact zone: Bringing theory and practice together* (pp. 48-57). Urbana, IL: NCTE.

- Bloomberg, J., Suchman, L., & Trigg, R. (1997). Back to work: Renewing old agendas for cooperative design. In M. Kyng & L. Mathiasessn (Eds.), *Computers and design in context* (pp. 267-288). Cambridge, MA: MIT Press.
- Bohman, J. (1999). Practical reason and cultural constraint: Agency in Bourdieu's theory of practice. In R. Shusterman (Ed.), *Bourdieu: A critical reader* (pp. 129-152). Oxford: Blackwell.
- Bolter, J. D., & Grusin, R. (1999). *Remediation: Understanding new media*. Cambridge, MS: The MIT Press.
- Bordieu, P. (2011). The forms of capital. In A. Sandovnik (Ed.), *Sociology of education: A critical Reader* (2nd ed., pp. 86-95). New York and London: Routlege.
- Bosley, D. S. (2004). Cross-cultural collaboration: Whose culture is it, anyway? In J. Johnson-Eilola & S. Selber (Eds.), *Central works in technical communication* (pp. 466-474). New York, NY: Oxford University Press.
- Bowie, J. L. (2009). Beyond the universal: The universe of users approach to user-centered design. In S. Miller-Cochran & R. L. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices and methodologies* (pp. 135-163). Cresskill, NJ: Hampton Press.
- Bradner, E. (2001). Social factors in the design and use of computer-mediated communication technology (Unpublished doctoral dissertation). University of California, Irvine.
- Bratteteig, T., Morrison, A., Stuedahl, D. & Mortberg, C. (2010). Research practices in digital design. In I. Wagner, T. Bratteteig, & D. Stuedahl (Eds.), *Multi-disciplinary design practices* (pp. 17-54). London: Springer-Verlag.
- Brooke, R. (1987). Underlife and writing instruction. *College Composition and Communication*, 38(2), 141-153.



- Brown, J. S., & Duguid, P. (1994). Borderline issues: Social and material aspects of design. *Human-Computer Interaction. Special Issue on Context in Design*, 9(1), 4-36.
- Bruffee, K. (1984). Collaborative learning and the 'Conversation of mankind.'" *College English*, 46, 635-52.
- . (1986). Social construction, language and the authority of knowledge: A biographical essay. *College English*, 48, 773-90.
- Buchanan, R, & Margolin, V. (1995). Introduction. In R. Buchanan & V. Margolin (Eds.), *Discovering design: Explorations in design studies* (pp. ix-xxvi). Chicago, IL: The University of Chicago Press.
- Buchanan, R. (1995). Rhetoric, humanism and design. In R. Buchanan & V. Margolin (Eds.), *Discovering design: Explorations in design studies* (pp. 26-66). Chicago, IL: The University of Chicago Press.
- Campbell, K. K., & Jamieson, K. L. (1990). *Deeds done in words: Presidential Rhetoric and the genres of governance*. Chicago, IL: U of Chicago P.
- . (Eds.). (1978). *Form and genre: Shaping rhetorical action*. Falls Church, VA: Speech Communication Association.
- Canagarajah, S. A. (1999). *Resisting linguistic imperialism in English teaching*. Oxford, UK: Oxford University Press.
- Carnegie, T. A. M. (2009). Interface as Exordium: The rhetoric of interactivity. *Computers and Composition*, 26, 164-173.
- . (2013). Design as problem solving. In E. R. Brumberger & K. M. Northcut (Eds.), *Designing texts: Teaching visual communication* (pp. 33-48). Amityville, NY: Baywood Publishing Company.

- Carpenter, R. (2009). Boundary negotiations: Electronic environments as interface. *Computers and Composition*, 26, 138-148.
- Chen, K.-H. (1995). Cultural studies and the politics of internationalization: An interview with Stuart Hall, D. Morley, & K.-H. Chen (Eds.), *Stuart Hall: Critical dialogues in cultural studies* (pp. 392-408). New York, NY: Routledge.
- Churchil, E F., & Wakeford, N. (2001). Framing mobile collaboration and mobile technologies. In B. Brown, N. Green, & R. Harper (Eds.), *Wireless world: Social and international aspects of wireless technology* (pp. 154-179). London: Springer-Verlag.
- Cole, M., & Engestrom, Y. (1993). A cultural-historical approach to distributed cognition. In G. Salomon (Ed.) *Distributed Cognition: Psychological and Educational Considerations* (pp. 1-46). Cambridge: Cambridge University Press.
- Cooper, M. (2005). Bringing forth worlds. *Computers and Composition*, 22, 31-38.
- Cope, B., & Kalantzis, M. (2000). Designs for social futures. In B. Cope, & M. Kalantzis (Eds.), *Multiliteracies: Literacy learning and the design of social futures* (pp. 203-234). New Work, NY: Routledge.
- Costall, A. (1995). Socializing affordances. *Theory & Psychology*, 5(4), 467-481.
- Corbett, E. P. J., & Connors, R. J. (1999). *Classical rhetoric for modern student* (4<sup>th</sup> ed.). New York, NY: Oxford UP.
- Cross, N. (1995). Discovering design ability. In R. Buchanan & V. Margolin (Eds.), *Discovering design: Explorations in design studies* (pp. 105-121). Chicago, IL: The University of Chicago Press.
- Dean, D. (2008). *Genre theory: Teaching, writing, and being*. Urbana, IL: NCTE.
- December, J., & Ginsburg, M. (1995). *HTML and CGI unleashed*. Indianapolis, IN: Sams.net.

- Deleuze, G. & Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*. (B. Massumi, Trans.). Minneapolis, MN: University of Minnesota Press. (Original work published 1980)
- Devitt, A. J. (2004). *Writing genres*. Carbondale, IL: Southern Illinois UP.
- Dias, P., Freedman, A., Medway, P., & Pare, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Dohney-Farina, S. (1996). *The wired neighborhood*. New Haven, CT: Yale University Press.
- Dourish, P. (2001). *Where the action is*. Cambridge, MA: MIT Press.
- Dragger, D. A., O'Connor, A., Lawless, S., & Wade, V. P. (2007). Service-oriented e-learning platforms: From monolithic systems to flexible services. *IEEE Internet Computing*, 11(3), 28-35.
- Dron, J. (2006). Any color you like as long as it's Blackboard. E-Learn Conference. Hawaii.
- du Gay, P. Hall, S., Janes, L., Mackay, H., & Negus, K. (1997). *Doing cultural studies: The story of the Sony Walkman*. London: Sage.
- Edwards, M., & McKee, H. (2005). The teaching and learning of Web genres in first-year composition. In A. Herrington & C. Moran (Eds.), *Genre across the curriculum*, (196-218). Logan, UT: Utah State UP.
- Edwards, A. (2005). Relational agency: Learning to be a resourceful practitioner. *International Journal of Educational Research*, 43, 168-182.
- Engestrom, Y. (1999). Activity theory and individual social transformation. In Y. Engestrom, R. Miettinen, & R. L., Punamki (Eds.), *Perspective on activity theory* (pp.19-38). Cambridge: Cambridge University Press.

- . (1993). Development studies of work as a testbench of activity theory: The case of primary care medical practice. In S. Chaiklin & J. Lave (Eds.), *Understanding practice: Perspective on activity and practice* (pp. 64-103). New York, NY: Cambridge University Press.
- . (1987). *Learning by expanding: An activity theoretical approach to developmental research*. Helsinki: Orienta-Konsultit Oy.
- Erickson, T. (1999). Rhyme and punishment: The creation and enforcement of convention in an on-line participatory limerick genre. In Proceedings of the 32<sup>nd</sup> *Hawaii International Conference on System Sciences* (pp. 1-10). Hawaii: IEEE.
- Eyman, D. (2009). Methodology and design practice for writing process and pedagogies. In S. Miller-Cochran & R. L. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices and methodologies* (pp. 213-228). Cresskill, NJ: ss.
- Feenberg, A. (2010). *Between reason and experience: Essays in technology and modernity*. Cambridge, MA: The MIT Press.
- Fiske, J. (1987). British cultural studies and television. In R. Allen (Ed.), *Channels of discourse, reassembled: Television and contemporary criticism* (2<sup>nd</sup> ed., pp. 284-326). Chapel Hill, NC: University of North Carolina Press.
- . (1992). Cultural studies and the culture of everyday life. In L. Grossberg, C. Nelson, & P. Treichler (Eds.), *Cultural studies* (pp. 154-173). New York, NY: Routledge.
- Foster, H. (2007). *Networked Process: Dissolving boundaries of process and post-process*. West Lafayette, IN: Parlor Press.
- Frost, E. A. (2011). Why teachers must learn: Student innovation as a driving factor in the future of the Web. *Computers and Composition*, 28, 269-275.

- Frow, J. (2006). *Genre*. London: Routledge.
- Geisler, C., & Slattery, S. (2007). Capturing the activity of digital writing: Using, analyzing, and supplementing video screen capture. In McKee, H. A. & DeVoss, D. N. (Eds.), *Digital writing research: Technologies, methodologies, and ethical issues* (pp. 185-200). Cresskill, NJ: Hampton Press.
- Genette, G. (1992). *The architext: An introduction*. Berkeley, CA: U of California.
- Gibson, J. J. (1977). The theory of affordances. In R, Shaw & J. Bransford (Eds.), *Perceiving, acting, and knowing: Toward an ecological psychology*. Hillsdale, NJ: Lawrence Erlbaum.
- . (1979). *The ecological approach to visual perception*. Boston, MA: Houghton Mifflin.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Berkeley, CA: U of California P.
- Giroux, H. (1991). *Border crossings: Cultural workers and the politics of education*. New York, NY: Routledge.
- . (2009). Cultural studies, critical pedagogy and the politics of higher education. In R. Hammer & D. Kellner (Eds.), *Media/cultural studies: Critical approaches* (pp. 88-106). New York, NY: Peter Lang.
- Gottschalk, K. K. (2002). Contact zones: Composition's content in the university. In J. M. Wolf (Ed.), *Professing in the contact zone: Bringing theory and practice together* (pp. 58-78). Urbana, IL: NCTE.
- Grabill, J. T. (2003). On divides and interfaces: Access, class, and computers. *Computers and Composition*, 20, 455-472.

- Grossberg, L. (1992). *We gotta out of this place: Popular conservation and postmodern culture*. New York, NY: Routledge.
- . (1994). Introduction: Bringin' it all back home- Pedagogy and cultural studies. In H. Giroux & P. McLaren (Eds.), *Border crossings: Pedagogy and the politics of cultural studies* (pp. 1-25). New York, NY: Routledge.
- . (1996). Identity and cultural studies: Is that all there is? In S. Hall & P. D. Gay (Eds.), *Questions of cultural identity* (pp. 87-107). London: SAGE.
- . (2009). Cultural studies: What's in a name? (One more time). In R. Hammer & D. Kellner (Eds.), *Media/cultural studies: Critical approaches* (pp. 25-48). New York, NY: Peter Lang.
- Hall, S. (1977). Culture, the media, and the 'Ideological Effect.' In J. Curran, M. Gurevitch, & J. Woolacott (Eds.), *Mass Communication and Society* (pp. 315-348). London: SAGE Publications.
- . (1986). On postmodernism and articulation: An interview with Stuart Hall. *Journal of Communication Inquiry*, 10(2), 45-60.
- Hall, S. (Ed.). (1997). *Representation: Cultural representations and signifying practices*. London: Sage.
- Hall, R. M., & Rosner, M. (2004). Pratt and Prattfalls: Revisioning contact zones. In A. A. Lunsford & L. Ouzgane (Eds.), *Crossing borderlands: Composition and postcolonial studies* (pp. 95-105). Pittsburgh, PA: University of Pittsburgh.
- Harris, J. (1997). *A Teaching Subject: Composition Since 1966*. Upper Saddle River, NJ: Prentice Hall.

- Hawisher, G. E., & Selfe, C. L. (Eds.). (1999). *Passions, pedagogies and 21<sup>st</sup> century technologies*. Logan, UT: Utah State University Press.
- . (Eds.) (2000). Introduction: Testing the claims. *Global literacies and the World-Wide Web* (pp. 1-18). New York, NY: Routledge.
- Hilligoss, S., & Williams, S. (2007). Composition meets visual communication: New research questions. In McKee, H. A. & DeVoss, D. N. (Eds.), *Digital writing research: Technologies, methodologies, and ethical issues* (pp. 229-247). Cresskill, NJ: Hampton Press.
- Hofstede, G., Hofstede, G.J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind/Intercultural cooperation and its importance for survival*. New York, NY: McGraw Hill.
- Hyland, K. (2012). Individuality or conformity? Identity in personal and university academic homepages. *Computers and Composition*, 29, 309-322.
- Johnson, S. (1997). *Interface culture: How new technology transforms the way we create & communicate*. New York, NY: Basic Books.
- Johnson, R. R. (1998). *User-centered technology: A rhetorical theory for computers and other mundane artifacts*. Albany, NY: State University of New York Press.
- Johnson-Eilola, J. (2004). The database and the essay: Understanding composition as articulation. In A. F. Wysocki, J. Johnson-Eilola, C. Selfe, & G. Sirc (Eds.), *Writing new media: Theory and applications for expanding the teaching composition* (pp. 199- 235). Logan, UT: Utah State University Press.
- Julier, G. (2008). *The culture of design* (2<sup>nd</sup> ed.). London: Sage.

- Kaptelinin, V. (1996a). Computer-mediated activity: Functional organs in social and developmental contexts. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 45-68). Cambridge, MA: MIT Press.
- . (1996b). Activity theory: Implications for human-computer interaction. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 103-116). Cambridge, MA: MIT Press.
- Kellner, D. M. (2002). Technological revolution, multiple literacies, and the restructuring of education. In Ilana Synder (Ed.), *Silicon literacies: Communication, innovation and education in the electronic age* (pp. 152-167). New York, NY: Routledge.
- . (2009). Toward a critical/media cultural studies. In R. Hammer & D. Kellner (Eds.), *Media/Cultural studies: Critical approaches* (pp. 5-24). New York, NY: Peter Lang.
- Kimme-Hea, A. C., & Turnely, M. (2010). Refiguring the interface agent: An exploration of productive tensions in new media composing. In C. E. Ball & J. Kalmbach (Eds.), *RAW [Reading and Writing] New Media* (pp. 257-273). Cresskill, NJ: Hampton Press.
- Knusen, J., Martinussen, E. S., Anrall, T., & Morrison, A. (2011). Investigating an “Internet of Hybrid Products”: Assembling products, interactions, services, and networks through design. *Computers and Composition*, 28, 195-204.
- Kolko, B. E. (2000). Cultural studies in/and the networked writing classroom. In S. Harrington, R. Rickly, & M. Day (Eds.), *The online writing classroom* (pp. 29-43). Cresskill, NJ: Hampton Press.
- Kress, G. (1999). “English” at the crossroads: Rethinking curricula of communication in the context of the turn of the visual. In G. Hawisher, & C. Selfe (Eds.), *Passions, pedagogies and 21<sup>st</sup> century technologies* (pp. 66-88). Logan, UT: Utah State



- University Press.
- . (2005). Gains and losses: New forms of texts, knowledge, and learning. *Computers and Composition*, 22, 5-22.
- Kuutti, K. (1996). Theory as a potential framework for human-computer interaction research. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 17-44). Cambridge, MA: MIT Press.
- Lam, W. S. E. (2008). L2 literacy and the design of the self: A case study of a teenager writing on the Internet. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 1189-1212). New York, NY: Lawrence Erlbaum Associates.
- Laurel, B. (1990). Introduction: What's an interface? In B. Laurel (Ed.), *The art of human computer interface design* (pp. xi-xiii). Boston: Addison-Wesley.
- LeCourt, D. (1998). Critical pedagogy in the computer classroom: Politicizing the writing space. *Computers and Composition*, 15, 275-295.
- LeFevre, K. B. (1987). *Invention as a social act*. Carbondale, IL: Southern Illinois University Press.
- Lievrouw, L. A., & Livingstone, S. (2006). Introduction to the first edition (2002): The social shaping and consequences of ICTs. In L. A. Lievrouw & S. Livingstone (Eds.), *Handbook of new media* (pp. 15-32). Thousand Oaks, CA: Sage.
- Leont'ev, A. N. (1978). *Activity. Consciousness. Personality*. Upper Saddle River, NJ: Prentice-Hall.
- Lull, J. (2000). *Media, communication, culture: A global approach*. New York, NY: Columbia University Press.

- Lunsford, A. A., & Ede, L. (1983). Why write ... together? *Rhetoric Review*, 1(2), 150-157.
- . (1986). Why write ... together: A research update. *Rhetoric Review*, 5(1), 71-81.
- . (2012). *Writing together: Collaboration in theory and practice*. New York, NY: Bedford/St. Martin.
- Marcus, A. (1997). History lesson: The web discovers user interface design. Design of computing systems: Cognitive considerations. *Proceedings of the Seventh International Conference on Human-Computers Interaction* (pp. 535-538). Amsterdam: Elsevier.
- Marcus, A., & Gould, E. W. (2012). Globalization, localization, and cross-cultural user-interface design. In J. A. Jacko (Ed.), *The human-computer interaction: Fundamentals, evolving technologies, emerging applications* (3<sup>rd</sup> ed., pp. 341-366). London, New York, NY: CRS Press Taylor & Francis Group.
- Mardsjo, K. (1996). Interfacing Technology. *Computers and Composition*, 13, 303-315.
- Margolin, V. (1995). The product milieu and social action. In R. Buchanan & V. Margolin (Eds.), *Discovering design: Explorations in design studies* (pp. 121-145). Chicago, IL: The University of Chicago Press.
- Marshall, D. P. (2004). *New media cultures*. New York, NY: Oxford University Press.
- McCarthy, J., & Wright, P. (2004). *Technology as experience*. Cambridge, MA: MIT Press.
- McKee, H. A., & DeVoss, D. N. (Eds.). (2007). *Digital writing research: Technologies, methodologies, and ethical issues*. Cresskill, NJ: Hampton Press.
- Miller-Cochran, S. K., & Rodrigo, R. (2006). Determining effective distance learning designs through usability testing. *Computers and Composition*, 23, 91-107.
- Miller-Cochran, S. K., & Rodrigo, R. L. (Eds.). (2009). *Rhetorically rethinking usability: Theories, practices, and methodologies*. New Jersey, NJ: Hampton Press.

- Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech*, 70(2), 151-167.
- . (1994). Rhetorical community: The cultural basis of genre. In A. Freedman & P. Medway (Eds.), *Genre and the New Rhetoric* (pp. 67-78). London: Taylor & Francis.
- Miller, C. R., & Shepard, D. (2009). Blogging as social action: A genre analysis of the weblog. In S. Miller (Ed.), *The Norton Book of Composition Studies* (1450-1473). New York, NY: W. W. Norton & Company.
- Miller, R. (2002). Fault lines in the contact zone. In J. M. Wolf (Ed.) *Professing in the contact zone: Bringing theory and practice together* (pp. 121-146). Urbana, IL: NCTE.
- Ministry of Education. (2008). Briefing to the incoming Minister. Wellington, Ministry of Education.
- Mirel, B. (2002). Advancing a vision of usability. In B. Mirel & R. Spilka (Eds.), *Reshaping technical communication* (pp. 165-188). Mahwah, NJ: Lawrence Earlbaum Associates.
- Monroe, B. (2004). Crossing the digital divide: Race, writing and technology in the classroom. New York and London, NY: Teachers College, Columbia University.
- Morrison, A., Stuedahl, D., Mortberg, C. Wagner, Liestol, G., & Bratteteig, T. (2010). Analytical perspectives. In I. Wagner, T. Bratteteig, & D. Stuedahl (Eds.), *Multi-disciplinary design practices* (pp. 55-105). London: Springer-Verlag.
- Muller, D. N. (2009). Digital underlife in the networked writing classroom. *Computers and Composition*, 26, 240-250.
- Nardi, B. A. (1996a). Activity theory and human-computer interaction. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 7-16). Cambridge, MA: MIT Press.

- . (1996b). Studying context: A comparison of activity theory, situated action models, and distributed cognition. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human-computer interaction* (pp. 69-102). Cambridge, MA: MIT Press.
- Naveh, G., Tubin, D., & Pliskin, N. (2010). Student LMS use and satisfaction in academic institutions: The organizational perspective. *Internet and Higher Education*, 13(3): 127-133.
- Norman, D. A. (1988). *The design of everyday things*. New York, NY: Basic Books.
- Orlikowski, W. J. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), 404-428.
- Pandey, I. P. (2007). Researching (with) the postnational “Other”: Ethics, methodologies, and qualitative studies of digital literacy. In McKee, H. A. & DeVoss, D. N. (Eds.), *Digital writing research: Technologies, methodologies, and ethical issues* (pp. 107-125). Cresskill, NJ: Hampton Press.
- Panthee, R. K. (2012). Web 2.0 technologies, cultural and technological hegemonies, and teaching design to deconstruct them in the cross-cultural digital contact zone. *Journal of global literacies, technologies, and emerging pedagogies (JOGLTEP)*, 1(1), 38-55.
- . (2013). Re/designing online platforms by Citizen Designers and their contribution to digital writing and research. In M. Limbu & B. Gurung (Eds.), *Emerging pedagogies in the networked knowledge society: Practices integrating social media and globalization* (pp. 280-294). Hershey, PA: IGI Global.
- . (2014). Inviting Citizen Designers to design digital interfaces for the democratization of online platforms. In G. Vershunko & M. Limbu (Eds.), *Digital rhetoric and global*

- literacies: Communication modes and digital practices in the networked world* (pp. 280-294). Hershey, PA: IGI Global.
- Papastergiou, M. (2006). Course Management Systems as tools for the creation of online learning environments: Evaluation from a social constructivist perspective and implications for design. *International Journal on E-Learning*, 5(4), 593-622.
- Pina, A. A. (2010). An overview of Learning Management Systems. In Y. Kates (Eds.), *Learning Management System technologies and software solutions for on-line teaching: Tools and applications* (pp. 1-19). Hershey, PA: IGI Global.
- Porter, J. E., & Sullivan, P. A. (2004). Repetition and the rhetoric of visual design. In C. Handa (Ed.) *Visual rhetoric in a digital world: A critical sourcebook* (pp. 290-299). Boston/New York, NY: Bedford/St. Martin's.
- Pratt, M. L. (1991). Arts of the Contact Zone. *Profession*, 91, 33-40.
- . (1993). Criticism in the contact zone: Decentering community and nation. In S. M. Bell, A. H. LeMay, & L. Orr (Eds.), *Critical theory, cultural politics, and Latin American narratives* (pp. 83-102). Notre Dame, IN: U of Notre Dame.
- . (1992). *Imperial Eyes: Travel Writing and Transculturation*. London: Routledge.
- Raskin, J. (2000). *The humane interface: New directions for designing interactive systems*. Boston, MA: Addison Wesley.
- Ros, S., Hernandez, R., Robles-Gomez, A., Caminero, A. C., Tobarra, L., & Ruiz, E. S. (2013). Open service-oriented platforms for personal learning environments. *IEEE Internet Computing*, 17(4), 26-31.
- Rosinski, P., & Squire, M. (2009). Strange bedfellows: Humans-computer interaction, interface design, and composition pedagogy. *Computers and Composition*, 26, 149-163.

- Russell, D. (1997). Rethinking genre in school and society: An activity theory analysis. *Written Communication, 14*(4), 50-54.
- Sapineza, F. (2007). Ethos and research positionality in studies of virtual communities. In McKee, H. A. & DeVoss, D. N. (Eds.), *Digital writing research: Technologies, methodologies, and ethical issues* (pp. 89-106). Cresskill, NJ: Hampton Press.
- Schryer, C. F. (1994). The lab versus the clinic. In A. Freedman & P. Medway (Eds.), *Genre and the new rhetoric* (pp. 105-124). London: Taylor & Francis.
- Selber, S. (2004). *Multiliteracies for a digital age*. Carbondale, IL: Southern Illinois University Press.
- Selfe, C. L. & Selfe, R. J. (1994). The politics of the interface: Power and its exercise in electronic contact zones. *College Composition and Communication, 45*(4), 480-504.
- Selfe, C. L. (2009). The movement of air, the breath of meaning: Aurality and multimodal composing. *College Composition and Communication, 60*, 616-63.
- Severino, C. (2002). Writing centers as linguistic contact zones and borderlands. In J. M. Wolff (Ed.), *Professing in the contact zone: Bringing theory and practice together* (pp. 230-239). Urbana, IL: NCTE.
- Silverstone, R., & Haddon, L. (1996). Design and the domestication of information and communication technologies: Technical change and everyday life. In R. Mansell & R. Silverstone (Eds.), *Communication by design: The politics of information and communication technologies* (pp. 44-74). Oxford: Oxford University Press.
- Simmons, W. M., & Grabill, J. T. (2007). Toward a civic rhetoric for technologically and scientifically complex places: Invention, performance, and participation. *College Composition and Communication, 58*(3), 419-448.

- Skjulstad, S., & Morrison, A. (2005). Movements in the interface. *Computers and Composition*, 22, 413-433.
- Slack, J. D. (1989). Contextualizing technology. In B. Dervin, L. Grossberg, B. J. O'Keefe, & E. Wartella (Eds.), *Rethinking communication: Paradigm exemplars* (vol. 2, pp. 329-345). Newbury Park, CA: Sage.
- . (1996). The theory and method of articulation in cultural studies. In D. Morley & K.-H. Chen (Eds.), *Stuart Hall: Critical dialogue in cultural studies* (pp. 112-127). New York, NY: Routledge.
- Slack, J. D. & Wise, J. M. (2005). *Culture + technology: A primer*. New York, NY: Peter Lang.
- Slack, J., Miller, D., & Doak, J. (1993). The technical communicator as an author: Meaning, power, authority. *Journal of Business and Technical Communication*, 7(1), 12-36.
- Spinuzzi, C. (2003). *Tracing genres through organizations*. Cambridge, M.: The MIT Press.
- . (2008). *Network: Theorizing knowledge work in telecommunications*. New York, NY: Cambridge University Press.
- . (2009). "Light green doesn't mean hydrology!": Toward a visual rhetorical framework for interface design. In S. Miller-Cochran & R. L. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices and methodologies*. Cresskill, NJ: Hampton Press.
- Star, S. L., & Ruhleder, K. (1996). Steps toward an ecology of infrastructure: Design and access for large information spaces. *Information systems Research*, 7, 111-134.
- Star, S. L. (1999). The ethnography of infrastructure. *American Behavioral Scientist*, 43, 377-391.
- Stevenson, R. B. & Stirling, C. (2010). Environmental learning and agency in diverse educational and cultural contexts. In R. Stevenson & J. Dillon (Eds.), *Engaging*

- environmental education: Learning, culture and agency* (pp. 219-237). Boston, MA: Sense Publishers.
- Stevenson, N. (2011). *Education and cultural citizenship*. Los Angeles, CA: SAGE.
- Stewart, D. C. (1988). Collaborative learning and composition: Boon or bane? *Rhetoric Review*, 7 (1), 58-83.
- Storey, J. (1999). *Cultural consumption and everyday life*. London: Arnold.
- Stuedahl, D., Morrison, A., Mortberg, C., & Bratteteig. (2010). Researching digital design. In I. Wagner, T. Bratteteig, & D. Stuedahl (Eds.), *Multi-disciplinary design practices* (pp. 3-15). London: Springer-Verlag.
- Stuedahl, D. & Smordal, O. (2011). Designing for young visitors' co-composition of doubts in cultural historical exhibitions. *Computers and Composition*, 28, 215-223.
- Sun, H. (2006). The triumphs of users: Achieving cultural usability with user localization. *Technical Communication Quarterly*, 15(4), 457-481.
- . (2012). *Cross-cultural technology design: Creating culture-sensitive technology for local users*. New York, NY: Oxford University Press.
- Taylor, P. (1992). Evaluating software: What Thoreau said to the designer. *Computers and Composition*, 9(1), 45-52.
- Trimbur, J. (1985). Collaborative learning and teaching writing. In B. W. McClelland & T. R. Donovan (Eds.), *Perspectives on research and scholarship in composition* (pp. 87-109). New York, NY: MLA.
- Turnley, M. (2005). Contextualized design: Teaching critical approaches to web authoring through redesign projects. *Computers and Composition*, 22, 131-148.



- Vanhoosier-Carey, G. (1997). Rhetoric by design: Using web development projects in technical communication classroom. *Computers and Composition*, 14, 395-407.
- Wagner, I., Bratteteig, T., & Stuedahl, D. (Eds.). (2010). *Multi-disciplinary design practices*. London: Springer-Verlag.
- Watzman, S., & Re, M. (2012). Visual design principles for usable interfaces: Everything is designed: Why we should think before doing. In J. A. Jacko (Ed.), *The human-computer interaction: Fundamentals, evolving technologies, emerging applications* (3<sup>rd</sup> ed., pp. 315-340). London, New York, NY: CRS Press Taylor & Francis Group.
- Williams, R. (1985). *Keywords: A vocabulary of culture and society*. London: Oxford University Press.
- Williamson, O. M., & Panthee, R. K. (2014). Stasis and theory of mind for First-Year Composition: A transdisciplinary exploration. *Journal of global literacies, technologies, and emerging pedagogies (JOGLEP)*, 2(2): 96-116.
- Wise, J. M. (2006). Technological culture. Plenary Keynote Address, *Asia Culture Forum*.
- Wolff, J. M. (Ed.). (2002). *Professing in the contact zone: Bringing theory and practice together*. Urbana, IL: NCTE.
- Wood, D. (1992). *The power of maps*. New York, NY: Guilford.
- Wysocki, A. F., & Jasken, J. I. (2004). What should be an unforgettable face.... *Computers and Composition*, 21, 29-48.
- Wysocki, A. F. (2004). Opening new media to writing: Openings & justifications. In A. F. Wysocki, J. Johnson-Eilola, C. L. Selfe, & G. Sirc (Eds.), *Writing new media: Theory and applications for expanding the teaching of composition* (pp. 1-41). Logan, UT: Utah State University Press.

- . (2005). Awaywithwords: On the possibilities in unavailable designs. *Computer and Composition*, 22, 55-62.
- . (2007). Using design approaches to help student develop engaging and effective materials that teach scientific and technical concepts. In C. Selfe (Ed.), *Resources in Technical Communication: Outcomes and approaches* (pp. 63-90). New York, NY: Baywood Publishing Company, INC.
- Yates, J., & Orlikowski, W. J. (1992). Genres of organizational communication: A structurational approach to studying communication and media. *The Academy of Management Review*, 17(2), 299-326.
- Yau, J., Lam, J., & Cheung, K. S. (2009). A review of e-learning platforms in the age of e-learning 2.0. In F. L. Want, J. Fong, L. Zhang, & V. S. K. Lee (Eds.), *Hybrid learning and education: Second International Conference, ICHL*. Berlin: Springer-Verlag Berlin.
- Yee, C. (2002). Contact zones in institutional culture: An anthropological approach to academic programs. In J. M. Wolf (Ed.), *Professing in the contact zone: Bringing theory and practice together* (pp. 257-273). Urbana, IL: NCTE.
- Young, P. A. (2008). Exploring culture in the design of new technologies of literacy. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 325-358). New York, NY: Lawrence Erlbaum Associates.

## **Vita**

Rajendra Kumar Panthee was born in a small village in Western Nepal. He completed his schooling in his village, and he went to Kathmandu, the capital city of Nepal, for further study. He earned his Bachelor and Master's Degree in Humanities and Social Sciences from Tribhuvan University, Nepal in 1996 and 1999 respectively. He received his MPhil in English in Humanities and Social Sciences from Pokhara University, Nepal. In 2009 he joined the doctoral program in Rhetoric and Writing Studies at The University of Texas at El Paso. He received the First Annual First-Year Composition Award for Dissertation and Baker Hernandez Research Graduate Program Research Award from the University of Texas at El Paso. He has focused his research work on digital literacy, multicultural and multilingual composition, and cross-cultural communication and technology design and has taught a variety of courses, including Multimodal Composition, Technical Communication, Business Writing, Linguistics, Survey Courses on Literature, and ESL in a variety of formats such as Face-to-Face, Hybrid, and 100% Online. He has presented his research at local, national and international conferences and workshops. Additionally he has published his research as book chapters and articles.

Permanent Address: Chhatragunj-9, Arghakhanchi, Nepal