Examining Online and Face-to-Face Activities of Non-Native English Speaking Students

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Abstract

The purpose of this mixed methods study was to examine non-native English speaking students’ activity in face-to-face versus online learning environments. This topic is discussed in multiple fields, including issues related to the global environment and academic mobility, trends and requirements in education, and intercultural communication and languages. This research had the unique opportunity to observe two graduate courses at a major U.S. university in the same topic (Statistical Data Management), one online and one face-to-face, taught by the same instructor in the same semester. Participants were graduate students and included native and non-native English speakers.

The findings of this study indicate that the activity of non-native English speakers increases in the online environment compared to face-to-face education. Nevertheless, non-native English speaking students preferred face-to-face courses. This article offers recommendations for those in international higher education to engage students actively in English based education independent of their native language.

Introduction

International students, many of them non-native English speaking students and scholars, will travel to the United States to participate in higher education. Others will prefer to stay in their home countries, or participate from varying geographical locations in online programs based in the United States (Gürüz, 2011). The Open Doors 2011 Fast Facts reported a total of 723,277 international students in the United States for the academic year of 2010-2011; in the last 10 years, this population has increased by 32% (Open Doors, 2012). Academic mobility refers to “scientists and scholars carrying out research and teaching in other countries, and students studying abroad for a full degree or as part of their degree requirements back home” (Gürüz, 2011, pp. 19-20). This growing international diversity results in challenges and opportunities for global learning (Gibson, Rimmington, & Landwehr-Brown, 2008, p. 11). Teaching foreign languages and foreign cultures, as well as international and intercultural collaboration, will be a key to successful international and global education (Gibson et al., 2008; Gürüz, 2011).

Online education has become a central pillar in international higher education. The National Science Foundation (NSF) defined the concept of online education as “the use of networked computing and communications technologies to support learning” (NSF, 2008, p. 5). More than half of the degree-granting postsecondary institutions in the United States offered online education by 2001 (National Center for Education Statistics NCES,
Ten years later, a survey with a sample of 1,055 colleges and university presidents found that 77% of U.S. higher education institutions offered online education in 2011 (Parker, Lenhart, & Moore, 2011).

In order to achieve high quality (online) learning, the academic lecture, reading, and writing should be enhanced with interactive teaching methods, e.g., discussions (Bonwell & Eison, 1991). “Discussion methods are among the most valuable tools in the teacher’s repertoire” (McKeachie & Svinicki, 2011, p. 36). Brookfield and Preskill (2005) argued, “virtually everything we know about good face-to-face discussion also applies online” (p. 220). With today’s technology (e.g., Internet, smart phones), participants may be located in geographically different places, while they still participate in the same online course. The challenge of geographical distance and even differences in time can be solved with technology (Gibson et al., 2008).

Today, English is a well-established language in the global business and academic world. Many scholars agree that English has developed as lingua franca in higher education (Björkman, 2011; Ferguson, Pérez-Llantada & Plo, 2011; Kaur, 2010; Matsuda & Friedrich, 2011). “Intercultural communication competence” (Lussier, 2007, p. 310) is a central element in higher education with a national and international student population. Non-native English speaking students and scholars come with a variety of cultural worldviews and expectations. This influences the communication in traditional and online educational environments. “Leaders in a globalized world need skills that allow them to collaborate, communicate, negotiate, think critically, and gain multiple perspectives through dialogic co-construction of meaning with individuals from different cultures” (Gibson et al., 2008, p. 12). Higher education should aim to teach and practice the skills needed in this globalized world. It will be critical to integrate and to leverage cultural and language diversity in educational environments.

First, we look at the global environment and the influence of technology on education. Second, we describe the study in more detail before presenting the results. Based on the findings we present recommendations and draw conclusions.

The Global Environment

The world has become a globalized village with technological advances and Internet technology. “Global village: A term coined by Marshall McLuhan in the 1960s that refers to a world in which communication technology unites people in remote parts of the world” (Martin & Nakayama, 2010, p. 21). Technology has changed the way we interact and with whom we communicate. Our environment has become increasingly interconnected. According to the statistics of the U.S. Census Bureau (2009), 22% of the jobs in the United States already depend on international businesses. For the future, the forecasts predict that this percentage will continue to rise.

The interconnected environment requires new competencies. Additions and changes of national education curriculum become necessary. The American Council on International Intercultural Education (ACIIE), in cooperation with the Stanley Foundation, identified “fifty-eight global competencies” (The Stanley Foundation, 1996). These competencies include the “ability to communicate with non-English speaking persons; awareness of diversity, similarities, and interdependencies; ability to work in diverse teams; accept responsibility for global citizenship; [and] understand that your community may become endangered without global competence” (Stanley Foundation, 1996, pp. 36-37).

Native and non-native speakers need to acquire the language used in the context specific to their academic environment (Sibold, 2011). “Academic vocabulary, however, is notably more difficult to learn than conversational language because it is more specific and sometimes abstract, making it difficult to grasp” (Sibold, 2011, p. 24). International students need to be prepared to use English in written and spoken form in academic and discipline specific contexts (Björkman, 2011). Academic language skills influence communication and academic success.

Technology in Education

In traditional face-to-face courses, communication is synchronous (at the same time) and in the same geographical location, mostly the same classroom. Communication takes place via spoken language. A research study of Hlas, Schuh, and Alessi (2008) found an imbalance in spoken face-to-face communication between native and non-native English speakers. Non-native English speakers participated less than native speakers in face-to-face courses. On the other hand, “the online environment balanced the conversation between native and non-native speaker participation both in quantity and quality” (Hlas et al., 2008, p. 364). Online courses can be synchronous, or asynchronous (independent of time, but usually within a given timeframe). Asynchronous online discussions are the most common teaching method in online or hybrid (face-to-face and online) education. Here, communication happens via written text. In asynchronous online courses, participants have the freedom to participate at different times in the same course. Students can take their time to compose their contributions. The findings of Hlas et al.
(2008) supported that the course method (online or face-to-face) has an influence on the quality and quantity of communication contributions of non-native English speakers.

**Participants**

This study collected data from graduate students of different nationalities enrolled in one of two courses with the same topic (Statistical Data Management), taught by the same instructor. One course was online and the other course face-to-face. Nineteen students registered in the online course, and 47 students enrolled in the face-to-face course.

The focus participants of this study were non-native English speakers. However, the researcher invited all enrolled students to participate in this study. For this study, a student, living in the United States for more than six years, was associated to the native English speaker group. Of the 66 students, 29 native English speakers and all 14 non-native English speakers agreed to participate in this study. Table 1 shows an overview of the course enrollment and study participation.

Table 1  
*Overview of the Course Enrollment and Participation in the Study*

<table>
<thead>
<tr>
<th>Course Method</th>
<th>Number of Students enrolled</th>
<th>Non-Native English Speakers</th>
<th>Native English Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>online</td>
<td>19 (4*)</td>
<td>2 (2*)</td>
<td>17 (2*)</td>
</tr>
<tr>
<td>face-to-face (F2F)</td>
<td>47 (39*)</td>
<td>12 (12*)</td>
<td>35 (27*)</td>
</tr>
</tbody>
</table>

*Note.* *Number of students that chose to participate in this study*

All 14 non-native English speakers (online and face-to-face) were students from Asia. The countries of origin were Bangladesh, China, India, and Vietnam. In the beginning of this study, the participating non-native English speakers had spent one month up to six years in the United States.

**Data Collection and Analysis**

For the study, the researchers conducted interviews and observed interactions between the instructor and students, and among the students in both research settings (face-to-face classes and the online environment). Observations were made at three course meetings of the face-to-face course, three online discussions, and one optional computer laboratory session. Additional data were collected from the university library resources and international salary data from the Internet.

An earlier study of Hlas, Schuh, and Alessi (2008) provided the first research question. The study of Hlas et al. focused on the interaction and activity between native and non-native English speaking students. The researchers gave permission to use the study design (Hlas et al., e-mail, April 6, 2012). The first question of this current study asked, “How does the amount of student discussion vary for students using English as their native language versus students using English as a foreign language in traditional (face-to-face) courses versus asynchronous online college courses?” (p. 341).

This study design quantified the number of communication contributions of native and non-native English speakers in online and face-to-face courses. The unit of analysis was the single “speech act” (Hlas et al., 2008, p. 342). A speech act consisted of a number of written or spoken words. The independent variables were speaker-type and course-method. A speaker was one student that could be either a speaker-type of native English speaker (NS) or a non-native English speaker (NNS). Speaker-type was a dichotomous variable. The variable “course method” defined the method chosen to teach the course. This variable had two values: online or face-to-face (F2F). The dependent variables were the number of speech acts and the amount of words per speech act. The number of speech acts was a continuous variable, counting each verbal or written contribution to the course. The amount of words per speech act was continuous and consisted of counting each word of one speech act. *T* tests analyzed the difference in the mean.

A detailed observation guide supported the data collection in the face-to-face course with up to 50 persons in the classroom. Before each observation in the face-to-face course, the researcher passed a numbered seating chart around the classroom. Students confirmed their permission to participate by entering their name. If students chose not to participate, they added a ‘X’ in their position on the seating chart. Each verbal contribution of the students was audio recorded and transcribed. Throughout the course, the researcher kept track of the course contributions of
the students by writing down recording time and student number (position in the seating chart). Transcription and documentation only distinguished native and non-native English speakers (omitting the names).

The additional research question in this current study addressed students’ perceptions of advantages (and disadvantages) of the two course methods (online and face-to-face courses) for non-native English speaking students.

The lead researcher conducted interviews in person on the university campus. Seven interviews were with non-native English speakers. Two of the non-native English speakers were online students. Six interviews were with native English speakers enrolled in the face-to-face course. The interviews took about 30 minutes. The researcher analyzed and coded the collected data. Based on the codes and memos, themes and categories emerged in the qualitative analysis of the data.

**Student’s Activity**

This mixed methods study analyzed the quantity of students’ communication contributions, or speech acts (students’ activity). Quantitative data were collected, in the online and face-to-face environments.

**Students’ Activities – Online**

In the first online discussion of ‘Statistical Data Management’, the instructions asked each student to post one initial introduction contribution, or speech act. The instructions proposed an introduction with about 200-300 words. The four students, who had agreed to participate in the study, contributed one speech act each. There were two native and two non-native English speakers. The average number of words per speech act was lower for the non-native English speakers (157 words) compared to the native English speakers (168 words).

In the second and third mandatory online discussion all students had to write one initial post. Each student had to reply to at least two posts of their peer students. The two native English speakers fulfilled the minimum number of three posts, overall. For the non-native English speakers, one student posted the minimum requirement, and the other student posted one additional optional reply to a peer posting in each online discussion. In the second online discussion, the average number of words for each post was 123 words for the two non-native English speakers compared to 96 words for the two native English speakers. In the third online discussion, the average number of words for each post for the two non-native English speakers was 98 words compared to 126 words for the two native English speakers. Table 2 shows an overview of the students’ activity in the online discussions.

<table>
<thead>
<tr>
<th>Online Discussions</th>
<th>Mean</th>
<th>Native English Speaker (n = 2)</th>
<th>Non-native English Speaker (n = 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(first online discussion)</td>
<td>Speech acts</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Words per speech act</td>
<td>168</td>
<td>157</td>
</tr>
<tr>
<td>Second online discussion</td>
<td>Speech acts</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Words per speech act</td>
<td>96</td>
<td>123</td>
</tr>
<tr>
<td>Third online discussion</td>
<td>Speech acts</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Words per speech act</td>
<td>126</td>
<td>98</td>
</tr>
</tbody>
</table>

A t test, t(10) = -0.477, p = .644, revealed no significant difference in the number of speech acts in the three online discussions between the non-native English speakers (M = 2.67, SD = 1.37) and native English speakers (M = 2.33, SD = 1.03). A second t test, t(10) = 0.179, p = .861, revealed no significant difference in the number of words per speech act between the non-native English speakers (M = 125.49, SD = 30.28) and native English speakers (M = 130.28, SD = 58.15).

In the online environment, native and non-native English speakers produced a similar amount of speech acts. There was no significant difference between the number of words per speech act in the online environment.
Students’ Activities – Face-to-Face

The professor usually started the lecture by distributing a handout to each student. In the first class, the average number of speech acts per student was higher for non-native English speakers (0.3) compared to native English speakers (0.2). The average number of words per speech act was the same (10 words) for all students independent of the native language. In the class towards the middle of the semester, the number of speech acts per student was lower for non-native English speakers (0.5); also, the average number of words per speech act was lower for the non-native English speakers (3 words) compared to native English speakers (10 words). For the class towards the end of the semester, the average number of speech acts per students was higher for the non-native English speakers (1.3). The average number of words per speech act was lower for non-native English speakers (4 words) than native English speakers (5 words). Table 3 shows an overview students’ activity in the face-to-face classes.

Table 3
Face-to-Face Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Mean</th>
<th>Native English Speaker</th>
<th>Non-native English Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Speech acts</td>
<td>0.2 (n=27)</td>
<td>0.3 (n=12)</td>
</tr>
<tr>
<td></td>
<td>Words per speech act</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Beginning of the semester</td>
<td>Speech acts</td>
<td>0.7 (n=26)</td>
<td>0.5 (n=10)</td>
</tr>
<tr>
<td></td>
<td>Words per speech act</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Middle of the semester</td>
<td>Speech acts</td>
<td>0.7 (n=20)</td>
<td>1.3 (n=12)</td>
</tr>
<tr>
<td></td>
<td>Words per speech act</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

In the quantitative analysis, a t test, \( t(106) = -0.639, p = .693 \), comparing the number of speech acts in the three face-to-face courses found no significant difference between the non-native English speakers (\( M = 0.67, SD = 1.34 \)) and native English speakers (\( M = 0.51, SD = 1.13 \)). A closer look at the number of words per speech act showed the following results: face-to-face course, a t test, \( t(21.534) = 2.395, p = .026 \), comparing the number of words per speech act in the three face-to-face courses found a significant difference between the non-native English speakers (\( M = 4.48, SD = 2.82 \)) and native English speakers (\( M = 10.04, SD = 8.65 \)).

Comparing native and non-native English speakers in the face-to-face course, non-native English speakers produced a similar amount of speech acts. There was a significant difference between the number of words per speech act. The non-native English speakers produced fewer words per speech act than native English speakers in the face-to-face course.

Students’ Activities in Face-to-Face and Online Courses

The main focus of this study was online and face-to-face activities of non-native English speakers. Therefore, the study tested the relationships between non-native English speakers’ activities and course methods. The unit of analysis was the speech act. All statistical tests used an alpha of .05 as level of significance.

An independent t test revealed that there was a significant difference, \( t(37) = -3.357, p = .002 \), in the number of speech acts for non-native English speakers between the online course (\( M = 2.67, SD = 1.37 \)) and the face-to-face course (\( M = 0.67, SD = 1.34 \)). There were more speech acts of non-native English speakers in the online course than in the face-to-face course.

An independent t test found that there was a significant difference, \( t(5.065) = -9.757, p < .001 \), in the number of words per speech act for non-native English speakers between the online course (\( M = 125.49, SD = 30.28 \)) and face-to-face course (\( M = 4.48, SD = 2.82 \)). The amount of words per speech act was higher in the online course than in the face-to-face course for non-native English speakers.

The first research question had asked, “How does the amount of student discussion vary for students using English as their native language versus students using English as a foreign language in traditional (face-to-face) courses versus asynchronous online college courses?” (Hlas et al., 2008, p. 341). This research found the following results: There were more speech acts and more words per speech act in the online course than the face-to-face course. Based on the findings, the online course environment was more favorable for native and also non-native English speakers.
Advantages of Online versus Face-to-Face Courses for Non-native English-Speaking Students

The second research question asked if there are advantages in online versus face-to-face courses for non-native English speaking students? The researcher analyzed data from course observations, student resources of the university, salary data (PayScale, 2013), and individual interviews with native and non-native English speakers. In the qualitative analysis, codes and memos built the basis for the categories and themes. Emerging themes and categories were as follows: English as a foreign language, course structure, financial commitment to education, and communication with the instructor.

English as a Foreign Language

All non-native English speakers who participated in the interviews passed the language proficiency requirements of the university (TOEFL minimum test score of 79 iBT). However, for some non-native English speakers, English was a problem. Students did not understand the instructor and preferred written course material: “the slides are very helpful. Sometimes I can’t understand the professor, and I can watch the slide” (NNS, personal communication, September 7, 2012). Others could not understand the English spoken in the classroom: “When I come here. The first class here in Alabama, they are having kind of Southern accent. A little bit difference for what we learn, Standard American English” (NNS, personal communication, September 27, 2012), and “the only problem I had in my first semester was understanding the accent of people speaking English. We are used to speaking European English” (NNS, personal communication, September 13, 2012). Students that learned English outside the USA became accustomed to a different sound (phonetics) of spoken language. An advantage of written language in online education, in particular for the non-native English speakers, was that written language does not have phonetics, or sounds of language. Accents and dialects were not as prominent in written language as in spoken language. Most written academic texts and presentation slides did not favor a regional accent.

Additionally, written asynchronous communication allowed more time to compose a communication contribution or speech act. In the interviews, the researcher asked, “How much time did you take to write an online discussion post (or formal E-mail if students had no online experience)?” Native English speakers took on average 6 to 8 minutes per post or E-mail. Non-native English speakers needed 11 to 14 minutes, almost twice as long. The answers supported that non-native English speakers took more time to write a post or formal E-mail. The online environment supported the flexible amount of time to answer and contribute to a discussion.

Non-native English speaking students mentioned that learning would be easy with textbooks in their native language (NNS, personal communication, September 7, 2012). Textbooks in foreign languages could accompany and increase understanding of the content for non-native English speakers. Based on the information in the interviews, a library search with the course title ‘Statistical Data Management’ as the key word produced the following results when sorted by language. Table 4 shows the results of a search in the university library online resources. The search on January 18, 2013, found 2,486,775 results.

<table>
<thead>
<tr>
<th>Language</th>
<th>Number of Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>2,285,032</td>
</tr>
<tr>
<td>German</td>
<td>3,008</td>
</tr>
<tr>
<td>French</td>
<td>1,327</td>
</tr>
<tr>
<td>Spanish</td>
<td>902</td>
</tr>
<tr>
<td>Portuguese</td>
<td>533</td>
</tr>
<tr>
<td>Undetermined</td>
<td>785</td>
</tr>
</tbody>
</table>

A system-sort by language did not offer any Asian language or Chinese. However, the first seven entries in the undetermined language category were in Chinese language from the Database China/Asia on Demand.
Course Structure

According to the data from the interviews, one of the biggest advantages of asynchronous online education was the flexibility in the course setup and structure. The flexibility related to time and access to content material and lectures.

The face-to-face course required mandatory physical presence on a specific day and time. In the online course, students could adjust learning times closer to their personal schedule instead of a fixed course-schedule. For example, one student noted “I will have time, flexi-time . . . it is all about, when I have time“ (NNS, personal communication, September 11, 2012).

The flexibility of online courses also applied to the time students spent studying the content. Students skipped parts of the slides and took more time where needed. A student explained: “I don’t know, I just pause the video” (NNS, personal communication, September 11, 2012), and “for some content, I just read the book. I got the sense, and I just skipped some of the slides. I think I got it. And sometimes, before the test, I would go back and check it. This is really helpful” (NNS, personal communication, September 27, 2012).

However, this advantage depended on the instructor and the course structure: “For some of the [online] classes it will depend how the teacher will set up the classes, as well as the content of the class” (NNS, personal communication, September 27, 2012). “If it is a really good organized professor, he or she will put everything online, and you can just follow the learning modules and learn it” (NNS, personal communication, October 3, 2012).

Financial Commitment to Education

Resident students observed that most international non-native English speaking graduate students expressed a great commitment to their education (NS, personal communication, July 25, 2012; NS, personal communication, September 27, 2012). The commitment included investment of time and money.

The estimated cost of attendance at the university for non-resident (international) students was $18,905 for one semester (retrieved on January 18, 2013). Students in the course worked towards a Master of Business Administration (MBA) or similar degrees. Although incomes in the countries of origin in Asia vary, one semester at this university costs about a yearly salary of an employee with a MBA degree in their Asian home country for students from Vietnam, Bangladesh, and India (PayScale, 2013). In comparison, in the United States, the costs for one semester were only one third of an average yearly income for the comparable population (PayScale, 2013). Table 5 shows the average range of yearly pay for an employee with a MBA degree in the USA and the countries of origin of the non-native English speakers in the courses.

Table 5

<table>
<thead>
<tr>
<th>Master of Business Administration (MBA) Average Pay per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>Vietnam</td>
</tr>
<tr>
<td>Bangladesh</td>
</tr>
<tr>
<td>India</td>
</tr>
</tbody>
</table>

*Note: Salaries (PayScale, 2013) converted to US Dollar on January 28, 2013 (http://www.finanzen.net/waehrungsrechner/).

Some non-native English speakers received their financial support from scholarships and/or their parents (NNS, personal communication, September 6, 2012). Other students encumbered themselves with debts (NNS, personal communication, November 26, 2012).

Online education offers the advantage of taking some courses while being in the home country, before or after an international experience in the United States. Based on Internet information of the university at the time of the study, this option could lower the estimated costs for one semester by $6,505 (for housing, parking, and meals) and left only costs for tuition, college fees, and books of $12,400 for one semester.
Communication with the Instructor

Communication with the instructor was a key concern for all students. Most students had the impression that the online environment would distance, change, and/or delay the conversations between the instructor and the student. One student noted, “I can ask some questions to the teacher, so it will help me [in the face-to-face course]” (NNS, personal communication, Sept. 6, 2012). Looking further at the communication theme, students perceived the communication with the instructor as influential for the comfort- and confidence-level: “I have the face-to-face interaction with the instructor. If I have questions, I can ask them . . . I have better communication with the instructor” (NNS, personal communication, September 27, 2012). Another student noted “I feel insecure if I do not see the professor. That means like, I get less help from the professor” (NNS, personal communication, Oct. 3, 2012).

The unfamiliar distance to the instructor in the online environment made the students feel insecure. Students perceived online communication not as equal to face-to-face communication in education.

Overall Advantages of Online Education for Non-native English Speakers

The asynchronous online environment has many advantages for non-native English speakers. The written language of the online environment solved some problems related to English as a foreign language. There are no phonetics or sounds of language. Students could adjust the level of detail and amount of time spent with the course content material according to their individual needs and their prior knowledge. Non-native English speakers can use a flexible amount of time to write communication contributions, or speech acts (e.g. online discussion posts), in asynchronous online education. Based on the opportunity to participate in online education independent of geographic location, the financial burden could decline.

However, non-native English speaking students were skeptical about the online course method: “I never take online courses, before. I am only used to listen to a teacher in a classroom, so I choose face-to-face class” (NNS, personal communication, Sept. 7, 2012).

Discussion and Recommendations

Higher education in the United States prepares students for job markets around the world. The consideration of course communication and language, course design and structure, and teaching methods that activate students are essential to utilize the opportunities of a diverse student body in international higher education. Use of online technology is a key element in professional international communication, worldwide. Online education is one option to become familiar with the course content and improve professional online communication skills. Higher education courses should incorporate online education components like online discussions, video-conferencing, and professional online communication (European Parliament 2006; Gibson et al., 2008).

To aim for the highest possible learning outcome, students also must learn from each other. International higher education with native and non-native English speakers should use the opportunity to motivate and activate the communication of its students. All students (native and non-native English speakers) can learn from each others’ cultures in addition to learning the course content. A non-native English speaker from China observed, “there are people from all over the world here in the U.S. We share our culture” (NNS, personal communication, September 7, 2012). International higher education can teach content and culture in the broader definition of culture by Hall (1981) involving “how people express themselves (including show of emotions)” (p. 16).

This research built on the study design of Hlas et al. (2008) to quantify students’ activity. The findings and observations of this current study strengthen the findings of Hlas et al. In the current study, native and non-native English speakers in ‘Statistical Data Management’ were more active in online than face-to-face courses. The students produced more communication contributions, or speech acts, and contributed more words per speech act to the online course conversations.

International non-native English speaking students hesitate to try online education; “I never really tried the online one, so I cannot tell, and I am afraid to try” (NNS, personal communication, Oct. 8, 2012). In order to overcome the hesitant attitude, the introduction to online education may begin in familiar face-to-face course settings. Adding mandatory online discussions may increase students’ activity and the number of communication contributions, or speech acts. Bailey and Wright (2000) found, “as the review of the literature indicated, the majority of the respondents agreed that students who typically did not participate in class tended to participate more in online discussions” (p. 10). Native and non-native English speakers can practice academic writing and professional online communications with guidance of the instructors. Hybrid courses (combination of face-to-face
and online courses) provide a way to keep the comfort of face-to-face communication. Intercultural learning and online learning interrelate the two new and challenging issues (Murphy, Gazi, & Cifuentes, 2007). If students were familiar with the course content, they became more courageous to consider unfamiliar ways of learning such as online education, “if the course is very unfamiliar for me, I would choose face-to-face. If the course will be related to what I have learned, I will choose online” (NNS, personal communication, September 11, 2012).

English as a foreign language challenges non-native speakers, especially in the beginning of an international education. Dialects and different pronunciations (e.g., accents) as a part of verbal speech of native and non-native English speakers causes misunderstanding for native and non-native English speakers (Kaur, 2010). Written communication without phonetics (sounds of language) solves some of the pronunciation problems. Earlier studies reported that course design and structure were necessary for good online education (Bailey & Wright, 2000; Swan, 2002). This current study confirmed the findings. Non-native English speakers connected a good structure and full online access of the course material as positive attributes of online education.

Universities could make an inventory of their library holdings and literature resources based on language. Literature in foreign languages can be favorable of students’ learning in international higher education. It may be favorable to include options for translations and access to international course material. A good guideline for the international literature holdings could be the number of international students speaking a foreign language in relation to the fields of study of these students.

Active learning is one framework that recommends and describes teaching methods to foster activity and contributions of students. Depending on the course content, the “Modified Lecture” (Bonwell & Eison, 1991, pp. 7) method, where the instructor complements the lecture with two to three minutes of student discussions after 12-18 minutes of the lecture, are feasible modifications. The short discussions will give students the opportunity to clarify questions and process the lecture information (Bonwell, & Eison, 1991). Non-native English speakers may switch back to their native language for clarification. All students can engage in short discussions, strengthen understanding of content material, and build social and academic communities. Community building can help to overcome (international) communication barriers (Murphy et al., 2007).

Limitations of the Study

The distinguishing characteristics of the students were native or non-native English speakers. This distinction served to gather information about the influence of a student’s non-native English language background in an English-based education. A limitation of the study was that it did not specifically look at the cultural background of each participant.

The nature of the courses was also a limitation. Statistics and statistical analysis are very theoretical subjects and can create “fear” in students (Bui & Alearo, 2011; Dykeman, 2011). The professional language is highly theoretical and mathematical. Both aspects could have limited students’ activity in both research settings (online and face-to-face).

The overall student population within the two courses was 66 students. Only 14 students were identified as non-native English speakers. The relatively small number of students was a limitation to generalizing the findings accurately to other international educational environments. However, the opportunity to analyze two courses with the same course content (Statistical Data Management), taught by the same instructor, in the same semester, in two different environments (online and face-to-face), and with native and non-native English speakers was a rare research opportunity.

Considerations for Future Research

In order to reevaluate and add to the findings of this study, future research should replicate the study and gather data from a bigger sample population of native and non-native English speakers in higher education. This research built on the study design of Hlas et al. (2008). The current study design further developed the classroom observation design with a step-by-step observation procedure. Based on this enhanced design, classroom observations with up to 50 persons became feasible.

This study looked at online and face-to-face courses. Data were collected from two courses with just one faculty member. Research comparing implementations of international higher education across different universities would be valuable. Data from observations of more courses, possibly across different academic fields, could reveal similarities and differences between universities and/or academic fields. The future research should include native and non-native English speaking faculty and staff members.
Long-term studies can observe non-native English speaking students and scholars in English based higher education. Once the students or scholars return to their home countries, future research should track students’ career development. What did the non-native English speaker accomplish regarding their career development after one year, three to five years, and up to ten years in their home country? Based on the findings of this future research, researchers can provide best practice scenarios, tell success stories, and generate theories.

As a consideration for future research, access to non-native English speakers was a challenge in this study. Non-native English speakers appeared to be a group of participants hesitant to participate. In this study, non-native English speaking online students only agreed to participate in the study via personal contact of someone within their community. Future studies with non-native English speakers should examine multiple ways to access participants and encourage participation.

Conclusions

The findings indicate that online environments are favorable for non-native English speakers. Although the course topic (Statistical Data Management) may be a limitation regarding students’ activity and participation, the non-native English speakers became more active in the online course environment and produced more communication contributions. The findings support that all students independent of their native language become increasingly active in asynchronous online learning environments. Asynchronous online courses are a productive addition to traditional face-to-face courses in international higher education. The online environment offers advantages especially for non-native English speakers. Nevertheless, non-native English speaking students are hesitant to consider online courses. Higher education should find ways to motivate students towards new ways of education.

A globalized approach to higher education with native and non-native English speakers should incorporate new ways to communicate. Professional online communication is one element. Today, purposeful usage of technology is a key component in international education. Global education should balance content, pedagogy, technology, and culture. It will be an advantage in the global world to be able “to deliver culturally sensitive and culturally adaptive instructions” (Parrish & Linder-VanBerschot, 2010, p. 1).

Students and instructors must dare to try unfamiliar methods of education. Instructional designers need to be creative and use the opportunities of online education instead of replicating traditional face-to-face learning online (The University of Western Australia, 2012). All students and instructors should gain online course experience. Online education is not “a savior” (Njenga, & Fourie, 2010). However, without experience it will be difficult to make the decision about the best learning options in higher education from an instructor’s or student’s perspective.

This research added a closer look at non-native English speaking students’ activities in online and in face-to-face courses. The researchers hope to inspire more ideas for further qualitative and quantitative research about English-based (global) higher education.

For this research, the distinguishing characteristic was native or non-native English speaker. In a future global education, the distinguishing characteristic should not be native or non-native speaker of a language. There are more characteristics and talents in students other than language. Students come with diverse backgrounds and bring different experiences and talents to education. Instructors should emphasize students’ activity and collaborative learning to leverage the diverse talents. Many current and future challenges in the world require teams with intercultural communications skills, diverse talents, and digital competence.

There is no “one best way” for such a complex context. However, one aim of this research was to develop recommendations for international higher education, and to evaluate advantages of (online) education for non-native English speakers. The findings of this study support that active learning and online education in international higher education can be beneficial for all students independent of their (native) language.
References


