



DIGITAL NATIVES AND DIGITAL IMMIGRANTS IN A PAPERLESS CLASSROOM

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As the variety and importance of IT continues to grow, the educational institutions try to look up-to-date by utilizing technology educationally. A tertiary level college in Al Ain, the United Arab Emirates was one of the sixteen colleges to implement Apple iPad tablet in Foundations language learning program in 2012, hence turning the traditional classroom into paperless. This change was experienced as a threat by majority of college teachers, whereas it was welcomed by majority of students. Prensky (2010) would explain this phenomenon by classifying today's teachers as digital immigrants as opposed to today's students who are supposedly digital natives. The aim of this study was to explore the nature of technology oriented classroom language, focusing specifically on the linguistic repertoire between teachers and learners in a mobile language learning classroom. To identify common or unique features of speech accommodation in a paperless classroom and to show how they affect teachers' speech behaviors, case study was used as a qualitative enquiry.

Keywords: Paperless classroom, Speech accommodation, Digital immigrants, Digital natives, iPad.

Introduction

Words, their meanings and usage in classroom discourse, as well as attitudes to linguistic behavior are the subjects of ongoing comment and debate. The way or manner in which a code is expressed is often as influential for the message as what is said. Thomas and Wareing (1999) mention that "our attitudes to language may be influential in our assessment of the characteristics of individuals. These assessments can then be carried over into the decisions that are made in important areas of our live such as education" (p. 188). Literacy in education is acquired in the context of schooling. "What goes by the name of 'logic' in classroom language is made possible largely by literacy" (Romaine, 2000, p. 217). Suleiman (1999) argues that it is hard to have conclusions about classroom discourse independently of notions of correctness students are taught in school when they are introduced to a particular subject. Romaine (2000) supports Suleiman's (1999) statement by the following example that she poses, "The children are given a question such as: Henry VIII had two wives. True or False? Why that is the correct answer is false? Henry, of course, had more than two wives but that means he had at least two" (p. 217). The accepted interpretation of this statement is that Henry VIII had only two wives, although there is nothing in

linguistic form to indicate that this should be so. "The teacher is trying to impose on the child a language which is in fact too explicit for the context without explaining why it is better to do so" (Romaine, 2000, p. 218). So, in classroom discourse teachers' assumptions about what good contributions or correct notions are without making them explicit to the students will cause language difference in the classroom, which in its turn will give way to speech accommodation. Wardhaugh (2002) would explain this phenomenon as "speakers often try to accommodate to the expectations that others have of them when they speak. One individual can try to induce another to judge him more favorably by reducing differences between two" (p.114).

To develop an understanding of iPad integrated classroom discourse two theoretical frameworks were utilized. First, Giles and Coupland's (1991) speech accommodation theory to explore the first part of the research question. Secondly, Prensky's (2010) digital native and immigrant theory was used to investigate the second part of the research question about the social independent variable: the impact of the teachers' age at their use of educational technology and speech accommodation skills.

Speech Accommodation Theory, introduced by Giles and Coupland (1991), is to be seen as a multiple-organized and contextually complex set of alternatives, regularly available to communicators in face-to face talk. It can function to index and achieve solidarity with or dissociation from a conversational partner, reciprocally and dynamically (pp. 60-61). Clark, Eschholz and Rosa (1994) see speech accommodation as a multidimensional phenomenon. Romaine (2000) agrees with this view explaining that "Speakers have at their disposal a range of forms which they can use to influence how their message is interpreted, how they view the context and how they align themselves with their audience ... which shows that style is a multidimensional phenomenon" (p. 78). A common modification of speech, where interlocutors alter their speech to resemble that of those they are conversing with, is convergence. Wardhaugh (2002) explains convergence as a shift in behavior to be more like the other (p. 114). Romaine (2000) sees convergence as a sign of solidarity and proves it by the sociolinguistic study of Norwich where the linguist who interviewed Norwich residents found afterwards on the recordings that he had changed his own use of glottal stops according to that of his interviewees. The result was not surprising since the linguist who conducted the interview was himself from Norwich and positively identified with the town and its inhabitants. In a different kind of study done by Yan, (2009) in Chinese cross-cultural teacher development program speech divergence was found to be caused by cultural differences and the lack of communication between the interlocutors. Wardhaugh (2002) explains divergence behavior to occur "if one desires to be judged less favorably" (p. 114).

Several studies have examined code switching as part of speech accommodation in different social situations. Grosjean (1982), who investigated code switching from sociolinguistic perspectives, defines it as "the alternate use of two or more languages in the same utterance or conversation" (p. 145). He also mentions that it can take a form of a word, phrase, a sentence or set of sentences. In addition to social context, Martin (1996) examined code switching in bilingual classroom settings in Brunei and came up with statement that code switching can constitute a form of 'safe language' for the classroom. Unlike Martin (1996), Lin (1996) conducted research in Hong Kong schools with students from different social backgrounds and came to claim that code switching in Chinese classrooms is the teachers' and students' local pragmatic response. It can be said that studies on speech accommodation have assisted in understanding why people speak the way they do, accounting for the manner in which they interpret their roles in society and classroom respectively. Wardhaugh's (2002) statement about this would be explicit here to mention, "Code and message are inseparable. Consequently, when a choice between codes exists you must exercise that choice with great care since it can affect what happens to the message you wish to communicate" (p. 113). Perhaps the most distinctive property of language is that its users can create sentences or chunks never known or used before and yet perfectly understand each other. Clark, Eschholz, and Rosa (1994) explain that "Language can meet our expressive needs virtually without limit, no matter

how little we have read or heard before, or what our new experiences call on us to express” (p. 4). Consequently, looking at language use in a virtual or digital setting and exploring and exploring the accommodation skills of its users will contribute in today’s ‘paperless classroom discourse’ gap.

“Today’s students are no longer the people our educational syst was designed to teach” (Prensky, 2001, p. 1). This is how Prensky (2001) starts his theory of digital natives and digital immigrants. He sees today’s students who were born in this era of advanced technology as ‘digital natives’ and today’s teachers who at later point in their lives became technology users as ‘digital immigrants.’ In classroom learning environment, teacher – learner communication is usually influenced by two main concerns: the requirement to cover the course content and make it accessible to the learners. Since, iPad integration is a novelty in education, there is limited research done in the field of classroom discourse and speech accommodation in a paperless EFL setting. This study through its two theoretical frameworks tried to identify symmetries and asymmetries in teacher talk in a technologically enhanced language classroom and looked at the participants’ speech accommodation skills from digital native and immigrant perspective.

Research Question

The research question guiding this study is:

What are the speech accommodation skills of Digital Native and Digital Immigrant teachers?

Research Method

This study was qualified as a qualitative study for many reasons. It aimed at looking at daily classroom discourse between the teachers and the students in a paperless language classroom and identifying the teacher’s speech accommodation skills. In qualitative research, the main goal is to understand the perspectives of the participants. “With the research goal of interpreting the social world from the perspectives of those who are actors in that social world, it follows that research methods include interacting with people in their social contexts and talking with them about their perceptions. These methods tend to be called qualitative” (Glesne, 2011, p. 8). In this study, the data was used to form concepts moving towards understanding of paperless classroom discourse and teachers’ speech accommodation skills; which, as an inductive process (Glesne, 2011), is another aspect of qualitative research.

Since speech accommodation in iPad integrated classroom discourse was a problem to be understood in the context of language teaching and learning setting, a descriptive, single-case design study was chosen as a form of a qualitative inquiry. “Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances” (Stake, 1995, p.11). A case study allowed for examination of patterns of speech accommodation in paperless language classroom and the context was crucial in investigating the research question.

The site of the case study was a tertiary level women’s college in Al Ain. The site consisted of two major programs: Foundations and BA. The case study concentrated on Foundations program which consisted of four levels of English proficiency courses, each of which lasted for one semester. Two level three language teachers with their classes were purposefully selected. Purposeful sampling for case study is suggested by Stake, 1995, “The researcher should have connoisseur’s appetite for the best persons ... Best usually means those that best help us understand the case, whether typical or not” (p. 56). A recruitment email was sent out to all foundation level teachers of the college clearly stating the aim of the study (Appendix C). Out of volunteered five teachers, two, with their 18 students in each class, were

purposefully selected for a 90 minute class observation each, based on their age and iPad implementation during the English language lessons. Teacher one was a 32-year-old bilingual whose L1 was Arabic and L2 English. Teacher two was a 54-year-old monolingual whose L1 was English. Both teachers had been attending professional Information Technology development sessions on monthly basis organized by the educational institution they work in for two years.

Direct observations were chosen to be carried out in this study. “Because a case study should take place in the natural setting of the ‘case,’ you are creating the opportunity for direct observations” (Yin, 2009). In both Foundations level classrooms the setups were comparable and rooms were similar in size as well as types of technology: interactive white board, marker board, teacher’s computer, apple TV, projector, OHP, Doc camera, printer, and student iPads. A checklist with speech accommodation taxonomy was used for data collection during both observations (Appendix A). The checklist was made by the researcher following Wardaugh’s (2002), Romaine’s (2000) and Suleiman’s (1999) studies. The taxonomy contained 20 speech accommodation features assumed to be observed during two lessons in teachers’ and students’ behaviors. Though, only teachers’ accommodation skills were planned to be looked at, the study found necessary to include the students’ speech patterns as well for both, content and IT related discourse to create thick data. The data collected from two lessons were compared and descriptively analyzed. The observational protocol investigated eight questions about the technology use during the lessons to assist in answering the second part of the research question. (Appendix B). The two lesson plans were also referred to as an argument offering additional information about the ways in which teachers utilized iPad technology while teaching. The data from two observations provided knowledge about the paperless classroom discourse. After reading through observational data, it was descriptively analyzed to answer the research question of the study and to picture a holistic view of the problem in question.

The study provided the participants with possible ethical protection. While this study did not include any risks to neither the teachers, nor students, measures were taken to provide them with anonymity and accurate representation (Yin, 2009). Participation in the study was voluntary and the teachers were informed about its goals (Appendix C). The students were observed in their usual classrooms with no intervention occurring to limit their achievement, hence; minimizing the risk of harm to participants (Yin, 2009). To anticipate the possibility of negative information drawn about the teachers’ teaching methods and students’ learning behaviors, measures were taken to keep participants’ anonymity and give them pseudonyms as: teacher one and teacher two.

This study followed certain steps to ensure its trustworthiness, ‘qualitative data was addressed through the honesty, depth, richness and scope of the data achieved’ (Cohen, L, Manion, L. and Morrison, K, 2001, p. 105). Member checks (Bell, 2010) with participant teachers were carried out to verify the accuracy of findings. Validity issues throughout the study investigation were minimized by referring to *Validation at Seven Stages* overview (Kvale, 1996, p.237).

Limitations of the Study

This research study explored technology integrated two paperless lessons and looked at two language teachers’ speech accommodation skills. Since it only described the case in one technological college, generalization to other colleges and teachers is limited, as differences in technology implementation, demographic differences and speech accommodation skills of the teachers vary between colleges. To account for limitations of observations, both teachers were assured they would remain anonymous at all times and member checking with them was done to confirm that their speech patterns were accurately captured. Furthermore, the researcher is also a faculty at the college involved in the study. Being a

colleague of two teachers and a known instructor to the students could have been a source of bias which was minimized by utilizing observational protocols (Appendix B).

Data analysis

The data gathered through two classroom observations is descriptively analyzed to answer the research question. The data collected through speech accommodation taxonomy (Appendix F and G) will be cross checked with two lesson plans (Appendix D and E) and observational protocols (Appendix B) to picture a holistic view of how technology based issues can affect teachers' speech accommodation skills. To do so, the data analysis first presents the content overview of the lessons conducted by both participant teachers. Secondly, the observational protocols present the impact of technology use on each lesson. Lastly, the data collected through speech accommodation taxonomy is descriptively analyzed and two teachers' speech accommodation skills compared through examples.

Lesson one – teacher one

The lesson started with a warm-up. The teacher asked students to:

- speak about stories and explain why they like reading stories and tales.
- bring examples from famous Arabic stories?
- read a story about Princess Penny and Prince Harry and look at the pictures that illustrate the story.

After the warm-up, the teacher moved to the pre-speaking stage and asked the students to:

- work in pairs.
- view a copy of the picture story in Dropbox app
- open it in neuAnnotate
- discuss its plot and take notes.

When students did what was required, the teacher asked them to look at the sentences and match them with pictures by discussing the answers with their peers. The students then moved to the pre-reading task where they were asked to work in pairs to arrange the story as it was in a form of a jigsaw puzzle. To provide visual assistance the teacher put on the Apple TV and switched on the mirroring. She then asked to save the files and send the already arranged stories as pdf files on her email to demonstrate and make correction immediately during the lesson, which the students did without any delays or problems. Peer correction was done when the teacher demonstrated some works through mirroring.

The post reading activity consisted of two parts:

- Ask and check the 3 grammar mistakes on past simple tense.
- Correct the mistakes looking at the correct variant displayed.

The teacher then asked the group to move to another iPad application called Pages, which is suitable for writing and multimedia implication. She asked them to:

- continue and write the ending of the story looking at the last 12th picture.
- Open dropbox, vocabulary section and view *helping-words*
- start creating the ending of the story using the word hints.
- write 1-2 sentences for the ending.

The pairs were asked to read their endings. The rest voted for the best ending through the Dropbox application. The best variant was chosen and the authors were graded. Finally, the teacher gave home-task to search in the internet or in the library for stories or fairy tales of other countries choose and read one and summarize through any iPad application the students would wish for.

Lesson two – teacher two

The warm-up started with a small discussion about visiting places:

- Have you ever traveled?
- Where did you go and what did you see?
- What are your anticipations when you visit a place?

The teacher asks students to open the text in Bb-learn which contained present simple, past simple and present perfect tense forms. The teacher had not previously copied the task from the master course, therefore, the students had problems in seeing the file. Almost 10 minutes were lost on figuring out the problem. When, eventually the problem was solved, the students were asked to read the text individually for 5 minutes. When they finished reading, the teacher asked directing questions about past and present referring to the text at hand.

The teacher kept asking questions based on present and past writing the answers in the corresponding columns on the board. When the 2 columns were filled with the necessary information the teacher drew the students' attention on the middle part of the already formed table and asked the following question: *what is in the middle of the past and now?* She expected to have the answer *change* or *transformation*, which she eventually got. When she got the answer, she wrote the word *change* in the middle column. For students to understand the meaning of *change* and see the difference between the past simple and present perfect, the teacher asked them to take each word in the 3rd column and find the chunk in the text containing those words and description of the illustrations respectively. When the students couldn't find the words and mixed up the grammar tenses, the teacher wanted to demonstrate the text on the board and highlight them herself for the group to see. She tried to do it through iPad mirroring, but the light would not come up. Instead of trying to easily solve the problem through settings or restarting, she simply did not know what to do and tried to call the IT helpdesk when students interfered and helped her out. This confusion took another ten minutes of her class time.

Before the students started the pair-activity called *Naughts and Crosses*, the teacher demonstrated it on the OHD avoiding iPad mirroring and gave instructions. The students worked in pairs and accomplished the task. They asked the teacher if they could use iPad apps for this task, but the teacher preferred the traditional app and avoided the new ones.

The teacher had planned to do a creative writing for the last part of the lesson, but because almost 20 minutes were lost on technology setup, she did not manage to accomplish the task and gave it as a home-work.

Speech Accommodation Taxonomy Data Analysis

The observed technological jargon from both teachers' sides was based on iPad related terminology. Teacher one used four iPad related applications during her lesson: Dropbox, neuAnnotate, Adobe and Pages, whereas teacher two used two: Bblearn and neuAnnotate. Teacher one was quite comfortable with

using technology related terminology, such as: iOS7, multitasking, multimedia, double tap, pdf files, apps, iCloud sync and icons, but teacher two avoided using terminology: “I’ll switch *this thing* on” meaning Apple TV mirroring. Teacher two avoided using symbols as well. This was apparent when instead of quickly drawing the Adobe symbol on the board she took time to write it. She not only avoided using terminology and symbols but also acronyms while giving instructions to the students: “Not the online Bblearn, the *usual one*” meaning Bb application. Unlike teacher two, teacher one did not show any hesitation about technology implementation throughout the lesson. Both teachers used recapitulations while teaching. On teacher one’s side it all came in a form of a rhetorical question or clarification where she tried to enhance the right answer from the student either asking back the same question, or posing and answering it herself with the help of intonation or examples. Teacher two used recapitulations only to direct students’ attentions on already distracted activity. Teacher two was put in indecision whenever it came to technology use: “wait, m ..., let me try it again” or “No, m ... let’s not try anything new this time.” Non-verbal divergence was also recorded on teacher two’s side when she pretended not seeing the student’s hand who wanted to argue against using the application. Non-verbal divergence was also recorded on teacher one’s side, but unlike her colleague, she nodded her head to help the student, thus putting her on the right track. Intonation change was observed during teacher one’s class when she asked a rhetorical question in a high tone to highlight the student’s mistake: “Are you recommended to save big files on the iCloud? Of course not” or “Wow” with what she wanted to praise another student’s answer. Unlike teacher one, teacher two used negative statements during different stages of the lesson: “Weird ... I saved it in this folder” or “I hate when this goes wrong.” Because of uncertainty in the beginning of the lesson teacher two used leveling terms in her speech: “Please, save it as ... like a document, *I mean* pdf file.” None of the teachers did code switching or converging.

The data analysis revealed that teacher one, who Prensky (2001) would call ‘a digital native’ because she was born during or after the introduction of digital technologies, possessed accommodation skills which allowed her to make the content through needed technology explicit for her students to understand without any complications or waste of class time due to her willingness and ease of conducting a digital classroom. The same cannot be said about teacher two, who Prensky (2001) would call ‘a digital immigrant’ because she was born and raised before the widespread adoption of digital technology. However, teacher two did accommodate the students but through such speech accommodation techniques as; hesitation, repetition, avoidance, divergence and negation due to her technology ignorance. The ‘digital immigrant accent’ can be seen in such things as turning to the Internet for information second rather than first, or in reading the manual for a program rather than assuming that the program itself will teach us to use it (Prensky, 2001, p. 2). “Today’s older folk were ‘socialized’ differently from their kids, and are now in the process of learning a new language. And a language learned later in life, scientists tell us, goes into a different part of the brain” (p.2). This study proved Prensky’s (2001) statement that “It is very serious, because the single biggest problem facing education today is that our Digital Immigrant instructors, who speak an outdated language, that of the pre-digital age, are struggling to teach a population that speaks an entirely new language” (p.2). ‘The digital accent’ in this study showed to have a big influence on the teachers’ speech behaviors, where it helped teacher one to be more confident and merge with her students in a digital classroom using positive accommodation techniques; such as clarifications, exemplifications and recapitulations, but hindered teacher two’s teaching pace causing the teacher accommodate the students through hesitation, negation or avoidance.

Pedagogical Implications and Contribution of Research

A common view of the nature of language teaching and the work of second language teachers is that the primary concerns of language teachers lie with the process of instruction itself, that is, with helping

learners acquire the language skills they need for a variety of purposes. In order to carry out this task in digital classroom, teachers need more than access to different techniques and instruments; they need an understanding of nature and purpose of educational technology, procedures for interpreting digital enquiry and ability to make appropriate decisions about technological instruction that can have significant impact on students, which this study tried to reveal. Looking at teachers' speech accommodation skills in a paperless classroom represents an important contribution to both: modern field of second language education and sociolinguistics by drawing together current thinking and approaches in language teaching; thus providing a conceptual outline that enables teachers to better understand the nature, purpose and limitations of educational technology use. So, this study suggests that the classroom discourse of the digital immigrant or digital native teachers in the mobileEFL classroom should be reconsidered and that further research should be undertaken.

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