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Contributors

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Beth Buchholz will finish her coursework during the 2012–2013 school year. Her research interests focus on how teachers “teach in the margins” in order to build on nonvalidated forms of student knowledge in this era of standards and accountability. She is most interested in exploring how “writing”— in all of its diverse (and technological) forms—can work to position children as creators rather than receivers and victims of knowledge, and in turn invite children to assert more empowering academic identities.

Colleen Chesnut is a PhD Candidate in Educational Leadership and Policy Studies, with a concentration in Educational Leadership and a minor in Latino Studies at Indiana University Bloomington. Her research interests include issues of equity for Indiana's Latino students, dual immersion education, professional learning communities, teacher preparation for working with ELL and Latino students, and the impacts of policy adoption and implementation on teachers. She is an Associate Instructor for A308, Legal and Ethical Issues in Education. She has begun her dissertation research and expects to finish within the next year. She will conduct qualitative research for her dissertation, which will focus on the roles and work of dual-immersion teachers working in professional learning communities.

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Sarah Hasaba holds a PhD in Education from La Trobe University, Australia; her doctoral thesis was entitled “Ugandan women in two village literacy classes: Literacy learning, poverty reduction and empowerment.” She also holds an MA in Development Studies from Uganda Martyrs University in Uganda. She was a recipient of the Japan Society for the Promotion of Science–United Nations University (JSPS-UNU) postdoctoral research fellowship based in Tokyo, Japan from August 2010–

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Iris P. Hewitt-Bradshaw is a Senior Instructor in Language, Literature and Linguistics at the University of Trinidad and Tobago. She holds a BA in Language and Linguistics, an MPhil in Language Education, a Diploma in International Relations and a Diploma in Education. She is currently a doctoral candidate at the University of the West Indies, St. Augustine, Trinidad. She has taught at both the secondary level and Teachers College, and regularly conducts workshops for primary- and secondary-school teachers. Over the past three years, Ms. Hewitt-Bradshaw has presented papers at the American Educational Research Association (AERA) Annual Meeting, and conferences of the International Reading Association, the National Council of Teachers of English, the University of the West Indies, and the University of Trinidad and Tobago. Her research interests include language across the curriculum, the development of oral language competence, and teaching and learning in creole language situations.

Thomas Patrick Huston is currently a third-year doctoral student at Indiana University in the Department of Curriculum and Instruction. He is pursuing a PhD in Curriculum Studies with a minor in Social Foundations of Education. Huston has been writing, teaching, and editing for over 10 years. During his tenure at Houghton-Mifflin Publishing he was responsible for the editorial review of customized test materials. He has also worked as a freelance editor and course designer for Pearson Custom Publishing, and published curricula in 2011 with Oxford University Press. His other interests lie within cultural anthropology, new media, language, and popular culture. In his spare time he enjoys traveling, writing, reading, art, photography, and film.

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Michael Takafor Ndemanu is Assistant Professor of Multicultural Education and English as a Second Language at the University of Southern Indiana, Evansville. He holds a PhD in Curriculum and Instruction from Indiana University Bloomington. He minored in Language, Literacy, and Culture, and holds a Master's degree in ESL as well as a Bachelor's degree in French and English. Prior to embarking on graduate studies in the US, he had taught French and English in secondary

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Ashley Patterson is a doctoral student in The Ohio State University's Multicultural and Equity Studies in Education program. She holds an MS in Reading Specialization from Hood College and BS degrees in Elementary and Special Education from Boston University. Her research interests are primarily concerned with intersectionality components of the identities and social navigation of biracial persons. With a professional background in classroom teaching of students with special needs, she is eager to translate multicultural-based research into benefits for the classroom.

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Mary Rice is a former journalist and folklore archivist. She is a current faculty member at Brigham Young University and a junior high language arts and English as a second language teacher. Her work is published in *English Journal*, *Educational Leadership*, *Brock Education*, *Teaching and Teacher Education* and *Studying Teacher Education*. She recently published *Adolescent Boys' Literate Identity* (Emerald Press). Her research foci are literacy, identity, and advocacy.

Julie Rust finished her doctoral coursework in the spring of 2012. Her research interests focus on the ethical-digital intersections that emerge from students' engagement with new media in the classroom. For her courses and research at Indiana University, she has looked at the impact of textspeak on literacy skills, the literacy practices inherent in the use of Facebook, how teachers facilitate online discussion forums, and what preservice teachers perceive to be the digital literacy needs of their future students.

Jingshun Zhang is a doctoral candidate at OISE, University of Toronto. He has over 18 years of practical teaching and research experience, and 5 years of academic administrative experience. He has a solid background in psychometric measurement, applied statistics, research methodology, program evaluation, educational administration, institutional research, graduate education, engineering education, and comparative education.

Introduction

Serafin M. Coronel-Molina

The *Working Papers in Literacy, Culture, and Language Education (WPLCLE)* is an annual peer-reviewed online publication that provides a forum for faculty and students to publish research papers within a conceptual framework that values the integration of theory and practice in the field of Literacy, Culture, and Language Education. The mission of this journal is twofold: (1) to promote the exchange of ideas and dissemination of research, and (2) to facilitate academic exchange between students, faculty, and scholars from around the world.

Publications in *WPLCLE* are full-length articles dealing with the following areas of research: first- and second-language acquisition, macro- and micro-sociolinguistics in education, linguistic anthropology in education, language policy and planning from local and global perspectives, language revitalization, pragmatics in language teaching and learning, literacy, biliteracy, multiliteracy and hybrid literacies, bilingual education, multilingual and multicultural education, classroom research on language and literacy, discourse analysis, technology in language teaching and learning, language and gender, language teaching professional development, quantitative and qualitative research on language and literacy education, language related to curriculum design, assessment and evaluation, English as a foreign or second language, multimodal literacies, new literacies or electronic/media/digital literacies. Among other areas of publication interest of the *WPLCLE* are the New Literacy Studies, home and workplace literacy, indigenous literacies of the Americas, sociocultural approaches to language and literacy education, second-language instruction and second-language teacher education, literacy as social practice, critical literacy, early literacy, practitioner inquiry/teacher research, children's literacy, African-American literacies, Latino/Hispanic literacies, cross-linguistic and cross-cultural literacy practices, heritage language and culture maintenance and loss, and local and global (transnational) literacies.

This volume marks the second collection of eleven essays and three book reviews chosen from an array of submissions for our 2013 publication. The first article, titled "Language choice motivations in a Bribri community in Costa Rica," was written by Janet Blackwood. This article describes a growing body of research that has been undertaken in a variety of contexts worldwide to explore language preference and use, as well as the attitudes and beliefs that may impact the maintenance and revitalization of endangered languages. There has also been considerable examination of the motivations that impact second-language learning and the choices speakers make regarding second-language learning and use; however this research has rarely extended to exploring the motivations influencing language choices in contexts where one of the languages is an endangered mother tongue language. Analyzing a portion of the data gathered from a larger study on language attitudes and practices, this study explores the language choices of members of an indigenous community in Costa Rica and the motivations that appear to influence those choices. An analysis is also made of the relationship

between the language choice motivations that are present, and current indigenous language revitalization efforts in the community.

As the second article of this section, Sarah Hasaba's "Perspectives on literacy: Exploring functional vs. sociocultural views on adult literacy learning in the case of Uganda" explains, illiteracy remains a global concern, especially among developing countries like Uganda. The 1990 World Education Conference in Jomtien, Thailand drew attention to the increasing number of illiterate individuals in the world, especially in developing countries. Consequently, the Education For All (EFA) campaign was launched, with UNESCO spearheading it. The campaign urged both developed and developing countries to invest in improving literacy and education levels among children and adults. The support for universal primary education has been enormous, with the United Nations putting forward eight Millennium Development Goals in 2000 to be achieved by 2015; goal 2 emphasizes universal primary education. This paper explores adult literacy promotion as an EFA effort and presents UNESCO's drive for functional literacy. It also presents the Ugandan government's Functional Adult Literacy Program and juxtaposes it with other alternative approaches to literacy learning, such as the social and sociocultural views of literacy. Findings from research conducted in 2006 and 2011 on the Functional Adult Literacy Program in Uganda not only point to program challenges limiting its effectiveness, but also call for a social approach to implementing any adult literacy program.

The third article, "Historical foundation of diversity courses in teacher education programs and challenges of pedagogic application" by Michael Takafor Ndemanu, examines the historical underpinnings of multicultural education with respect to its origin, goals, and struggles for implementation in public schools prior to the 1970s. It also explores the impeding factors that have up to now hampered effective multicultural education preparation for preservice teachers, who are expected to acquire instructional strategies grounded in the core values of multicultural education in order to be effective teachers of diverse student populations. The setbacks, known as areas of concern in multicultural teacher education courses, are explored in this article and classified as follows: unpreparedness of middle-class, white preservice teachers; scope of the curriculum and pedagogy; preservice teachers' deficit beliefs; preservice teachers' resistance to diversity and equity courses; racial identities of the instructors of diversity courses; and direct experiences. The examination of these setbacks is meant to raise awareness of the intricacies of teaching diversity and equity courses for teacher educators, and not to discount the contribution of such courses in inculcating cross-cultural awareness and praxis in prospective teachers.

The fourth article, "The expression and conceptualization of motion through space and manner of motion in Arabic and English: A comparative analysis" by Ghadah AlMurshidi, is a comparative analysis of English and Arabic expressions of motion events using narratives of Chafe's (1980) *Pear Story* that were elicited from speakers of Arabic, English, and Persian. The native-speaker English narratives were elicited by Feiz (2007). A discourse analytic approach is used to examine how speakers of Arabic and English indicate motion through path, manner, and ground. The data consist of 60 elicited oral narratives. The narratives are all based on Chafe's (1990) *Pear Film*, which is a 6-minute film with many characters, but no dialogue. Fifteen of these are in Arabic, fifteen in English

by Arabic speakers, fifteen in English by English speakers, and fifteen in Persian. The findings of this study indicate that Arabic is a verb-framed language (Talmy, 2007). It has a variety of path verbs such as *yadheh* “fall,” *yamer* “pass,” and *yenzel* “descend.” Also, the stative verb is used frequently in Arabic by all Arabic speakers to describe a static location (Feiz, 2007). The total number of uses of the stative verb in Arabic is 71 tokens. In addition, the verb *yati* “come” is used in Arabic as an introduction of newcomers, as in English (Feiz, 2007). However, the use of the manner verbs in Arabic, such as *etkhardhaf* “tumbles,” is rare. English is considered a typical satellite-framed language. It has a large number of manner verbs (Slobin, 2003). Some deictic verbs are used with path satellites (e.g., comes along). Other manner verbs are used with path satellites (e.g., climb down and walk back). Multiple path satellites also appear in English (e.g., came down off and climbed back up in).

The fifth article, “The missing response patterns in the Ontario Secondary School Literacy Test” by Jingshun Zhang and Ruth A. Childs, makes the point that large-scale assessments are often an important indicator of students’ achievement for schools, states, and provinces. Missing responses can affect the appropriateness of our analysis models and the results of large-scale educational assessments. The study of missing response patterns (MRPs) can inform the design of a test and the interpretation of test results. This study will examine the causes and effects of MRPs based on analyses of students’ responses to the Ontario Secondary School Literacy Test (OSSLT) in 2006. This is a test with high stakes for students. With some preliminary statistical analyses in SPSS (descriptive statistics, plots, and cross-tabs, and multinomial and logistic regressions), the authors explore possible causes of MRPs by examining the relationships between patterns of missing responses and responses to test items and background questionnaire items. All results will be helpful for us to understand more about the test’s construct and internal validity to support improvement of the relevant large-scale assessment in the future.

The sixth article, “Exploring metacognitive online reading strategies among university students in four nonnative English-speaking countries” by Yoo-Jean Lee, James Chamwada Kigamwa, Suphawat Pookcharoen and Vichea In, is a cross-cultural study that investigates metacognitive online reading strategies of students from four countries: Cambodia, Thailand, South Korea, and Kenya. An online self-report survey of reading strategies (OSORS) was administered to 132 university students from the four countries. The self-report survey tool was then complemented through a think-aloud procedure administered to eight randomly selected students. The students were instructed to “speak out” their thoughts as they navigated around an online text. ANOVAs were applied to examine whether there were significant differences in the students’ use of strategies from the different countries. The researchers also analyzed the think-aloud outputs from each student to determine the strategies that were used. The findings show that the students from the four countries differed significantly only in their use of global online reading strategies, but not in their use of problem-solving and support strategies.

The seventh article, “Language policy and planning for Latinos in Indiana: A case study” by Colleen E. Chesnut, is concerned with the language policy implications of the rapid growth of Latino populations in Indiana and many other areas of the Midwest. The study focuses on how Indiana’s state and local institutions, including government agencies, schools, and community organizations, have responded to expansion of Latino

communities, examining evidence of language policy and planning in these responses. An epistemological framework outlining the parameters of language policy and planning will be provided, as well as a brief historical narrative to establish the context for Latinos in Indiana. Demographic data and document analysis reveal both the salience of this research for a growing Latino population and the current availability of resources and information about policy around language planning for this group. Findings illustrate that English remains the primary *lingua franca* for Indiana, though some evidence indicates scattered efforts to reach out to Latino citizens in Spanish through a variety of means. This research contributes to a growing body of literature on experiences of Latinos in the Midwest and policymakers' efforts to better serve the needs of these growing communities.

The eighth article, by Iris P. Hewitt-Bradshaw, is entitled "Teacher oral language use as a component of students' learning environment in mathematics and science." This paper adopts a qualitative approach to investigate classroom interaction in mathematics and science at the elementary school level. Specifically, it examines teachers' oral language to elucidate the role it plays in shaping the students' learning environment in a Creole language context. Using a framework of Halliday's systemic-functional linguistics and Bourdieu's social theory, Hewitt-Bradshaw analyzes six instructional episodes in mathematics and science to uncover features of teachers' oral language that influence the students' learning environment. The analysis suggests that teachers' classroom speech reflects the linguistic complexities of school mathematics and science and can be challenging for learners' comprehension, especially in a second language situation. Sociolinguistic aspects of classroom interaction are also important to fully understand how teacher language affects student engagement in classroom discourse when their active participation is crucial to the understanding and use of academic language. Based on the findings and the research literature, the author offers recommendations and a strategy for teachers who wish to use language in ways that better facilitate student learning across the curriculum.

The ninth article, "Co-constructing a student-led discussion: Students' and teachers' talk in a democratic classroom" by Beth Buchholz, focuses on an ethnographic study of in-class student-led discussions. While previous research has identified discourse practices beyond IRE in which students and teachers can engage during student-led literature-based discussions, little research has examined how young children discuss issues of interest outside of a literature discussion model. This ethnographic study conducted in a local public elementary school tracks students' and teachers' navigation practices and contributions during weekly "student-led" discussions to better understand issues of intellectual agency and authority within democratic classrooms. The research question is how do a group of multiage students and their teachers construct and navigate democratic, student-led discussions? Subquestions are (1) what practices do students engage in during the discussions? (2) What practices do teachers engage in during the discussions? (3) What ideas are introduced, explored, and examined during the discussions?

The tenth essay, "The world of penguins: The role of peer culture in young children's interaction in online games" by Tolga Kargin, explores the influence of digital literacy practices on learning. In this study, to be able to understand the role of children's

interactions with each other and the role of online and offline communities on children's play and digital literacy practices, Kargin examined the collaborative play of a group of children within the Club Penguin virtual world in an after-school setting. There were eight participants (one girl and seven boys) between five and eight years old. During the study, the participants worked independently but sat side by side in the computer room as they controlled their penguin avatars in the virtual world. To answer the central research questions, several kinds of data collection methods were employed: participant observation (Ericson, 1990), fieldnotes, and videotapes of all 6 one-hour-long sessions during the study. Since the author focuses particularly on the interactions among children and their effects on play and literacy practices, he chose to employ Vygotsky's Zone of Proximal Development (ZPD) concept as the theoretical framework. Furthermore, to be able to analyze the influence of children's online and offline communities on their play and digital literacy practices, second-generation activity theory (Engestrom, 1987) was used.

The final article, "Distinguishing features of funds of knowledge, curriculum of lives, habitus, and discourses" by Mary Rice, explores the affordances and limitations of several popular conceptual frameworks often used in qualitative literacy research, especially research where narratives are used as data. These frameworks are *Funds of Knowledge*, *Curriculum of Lives*, *Habitus*, and *Discourses*. The author draws on the narratology of Bal (1997) to open space for comparing these frameworks, and through a sample analysis of one narrative, exposes underlying assumptions the frameworks reveal about relationships in research, literacy, and narrative analysis.

This second volume of *WPLCLE* ends with three book reviews: the first is by Julie Rust and Beth Buchholz on the book *You are not a gadget to education: A manifesto*, by Jaron Lanier; the second one is by Thomas Patrick Huston on the book *Hanging out, messing around, and geeking out: Kids living and learning with new media*, by Mizuko Ito et al.; and the last is by Ashley Patterson on the book *White kids: Language, race, and styles of youth identity*, by Mary Bucholtz.

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Our special thanks go to Jaehan Park, who provided valuable assistance as Managing Editor. We also owe a debt of gratitude to institutions, friends, colleagues, and social media venues from Indiana University and from around the world for their help in publicizing the *WPLCLE* Call for Papers locally and globally.

Last but not least, we are grateful to all the contributors to this volume for choosing *WPLCE* to publish their work. Our gratitude also goes to the Department of Literacy, Culture, and Language Education in the School of Education for hosting the *WPLCE* website and for supporting this new publication venue. Without the generous assistance of all these fine people and institutions, *WPLCLE* would not have become a reality.

Language Choice Motivations in a Bribri Community in Costa Rica

Janet Blackwood

Abstract

A growing body of research has been undertaken in a variety of contexts worldwide to explore language preference and use as well as the attitudes and beliefs that may impact the maintenance and revitalization of endangered languages. There has also been considerable examination of the motivations that impact second language learning and the choices speakers make regarding second language learning and use. However this research has rarely extended to exploring the motivations influencing language choices in contexts where one of the languages is an endangered mother-tongue language. Analyzing a portion of the data gathered from a larger study on language attitudes and practices, this study explores the language choices of members of an indigenous community in Costa Rica and the motivations that appear to influence those choices. An analysis is also made of the relationship between the language choice motivations that are present and current indigenous language revitalization efforts in the community.

Introduction

In spite of increased support for the maintenance and promotion of indigenous languages in recent years, these languages continue to be under an escalating threat of extinction in many areas of the world (Bradley, 2002; Harrison, 2007; Linden, 1991). This continuing threat has resulted in an ongoing need for an exploration of contributing factors that may impact the success of language revitalization efforts being undertaken to preserve endangered languages. One of these factors, attitudes about a language, has long been viewed by researchers “as a decisive influence on processes of linguistic variation and change, language planning, and the maintenance or loss of languages in a community” (Choi, 2003, p. 82). As a result, several researchers have undertaken studies in a variety of contexts worldwide to explore language preference and use as well as the attitudes and beliefs that may impact the maintenance and revitalization of endangered languages (Baker, 1992; Choi, 2003; Garcia, 2002, 2005; Hornberger, 1988; King, 2000; Lasagabaster, 2003). Many of these scholars have speculated on the causal relationship between attitudes about a language and actual language use and maintenance (Baker, 1988, 2001; Costenla Umaña, n.d.; Lasagabaster, 2003). Both Choi (2003) and Baker (1988) argue that having a positive attitude toward a language is likely to increase language use and consequently aid in the maintenance of the language.

Based on these findings, it would seem reasonable to expect that the opposite would also be true—that a negative attitude would be likely to discourage language use and therefore might result in language shift or loss. A number of authors (Baker, 1988; Hornberger, 1988; Jaspaert & Kroon, 1988; King, 2000; Woolard & Gahng, 1990) have

shown, however, that the relationship between linguistic attitudes and language choice and behavior is not nearly as straightforward and simplistic as it would at first appear. Contrary to the conclusion that a positive attitude toward a language will inevitably result in positive action with regard to language use, research undertaken by Baker (1988) in Ireland, Scotland, and Wales, Hornberger (1988) in Peru, and King (2000) in Ecuador revealed an apparent cultural or linguistic pride in the participants' mother tongue languages;¹ however, those positive feelings were not reflected in actual language use. My own research in Costa Rica (Blackwood, 2009) on language attitudes and practices has yielded similar evidence of the difficulty in correctly predicting language behavior based on language attitudes. This apparent disconnect between language attitude and linguistic action leads to the question of whether attitude is as much of a "decisive influence ... on maintenance or loss of languages in a community" as Choi (2003) contends, or if there are other factors which may motivate language choice and use, and additionally, whether information regarding those motivational factors may prove to be useful in informing decisions regarding language revitalization efforts.

In an attempt to answer these questions and identify the probable underlying motivations that impact language choices and behavior with a view toward informing practices surrounding language revitalization efforts, this study will analyze data previously gathered as part of a larger study of language attitudes and practices in a Bribri indigenous community located in southeast Costa Rica.

Literature Review

Previous research related to language choices and motivations has focused primarily on learning a language as a second or additional language or the language or languages people choose to use when the option is available to use more than one. However, there appears to be little published research addressing the intersection of language choice motivations and language revitalization efforts. This lack of research is particularly apparent when considering smaller indigenous populations such as the Bribri of Costa Rica. This review of the literature will examine three areas. First, I will explore what is meant by language choice, followed by an examination of perspectives on language motivations. Finally, I will look at the intersection between language choice motivations and language revitalization efforts.

Language Choice

Although Language Choice research is part of a larger body of research which explores the ideas of Choice Theory, Internal Consistency of Choice, and Revealed Preference Theory among others, due to space limitations, I have chosen to focus only on Language Choice.

¹ According to Ibrahim (1999), "Mother Tongue is the first-acquired language whereas L1 is the language of greatest mastery. One's mother tongue can be one's L1, but one can also have an L1 that is not one's mother tongue" (p. 356). Within the indigenous community studied here, however, the term "mother tongue" is used to refer to the indigenous language of Bribri whether or not a person is able to speak it. While they are not always considered synonyms, I have chosen here to use the terms "mother tongue language," "ancestral language," and "heritage language" interchangeably.

References to Language Choice in the literature often focus on the macrosocietal level and involve choices made by someone on behalf of others (Bisong, 1995; Curry & Lillis, 2004; Heller, 1992, 1995). Common examples of this include official language policies regarding the language of instruction in schools or other public institutions or the choice of a lingua franca in a newly liberated former colony. Literature related to language choices at the microsocietal level has tended to focus on choices regarding foreign or second language acquisition rather than addressing the daily decisions individuals make regarding language use that, when combined with the language choices of other speakers, lead to either language maintenance, language shift, or the reversal of language shift.² Edwards (1985, cited in Karan, 2008), attributed language choices to “pragmatic decisions in which another variety is seen as more important for the future” (p. 71). Edwards argued that “‘pragmatic considerations’ such as power, social access, and material advancement” (cited in Karan, 2008, p. 2) were key not only in the study of language use and shift, but also in understanding the success of attempts to reverse language shift (Karan, 2008).

Language Motivation

Research on Language Motivation has historically been connected with the field of second language acquisition or foreign language teaching. It has long been believed that language learners with higher levels of motivation will be more likely to achieve success in acquiring an additional language. However, there has not always been agreement about what constitutes motivation and how different types of motivation should be identified and categorized. Gardner and Lambert (1972) first proposed that language-learning motivation could be viewed as integrative. When integrative motivation is present, the language learner or user believes that particular language skills are necessary in order to fully participate in social groups that use the target language. This type of motivation, which is often perceived as being more likely to be internally generated, is often contrasted with instrumental motivation, which is thought to stem more from external factors. Instrumental motivation (Gardner & MacIntyre, 1991) influences a learner to study a language because there is something to gain from doing so, such as money or a better job. A number of other models of motivation have also been proposed, including Dörnyei and Ottó’s process model (1998, cited in Chen, Warden & Chang, 2005), which divides motivation into three phases: pre, during, and post-actional, and Noels et al.’s (2000) external regulation/integrated regulation scale. None of these models, however, specifically addresses language choice or motivation in the context of endangered languages or examines the motivations that may lead to the loss of a language or the reversal of language loss either at the microsocietal or macrosocietal levels in this context.

Language Choice Motivations and Language Revitalization

Karan (2008) argues that “revitalization of a language involves speakers making thousands of individual language choice decisions,” (p. 2) and he views motivations as being a key factor in shifting those choices in a direction that will lead to the success of language revitalization efforts. Building on previous research by Edwards (1985), Karan (2000)

² Language Shift Reversal and Language Revitalization are terms that are used interchangeably in the literature.

introduced the Perceived Benefit Model of Language Shift, based on the argument that “language choice decisions (as well as language acquisition decisions) are influenced by a limited set of motivators” (p. 2). His more recent work expands on the original four categories of motivations proposed in previous research, and includes two additional types of motivation. While Karan presents these in his work as a taxonomy of separate language choice motivations, he does emphasize the fact that these motivations are seldom truly discrete items and in fact are more often manifested as overlapping and blended combinations of two or more motivations. The six motivators included in Karan’s Taxonomy of Language Choice Motivations (2008) include:

- *Communicative Motivation* – Because language serves a communicative purpose, the choice is made by speakers to use the language that can best be understood by those engaged in the conversation.
- *Economic Motivations* – Language choices are made based on the potential for financial benefit that is attached to a particular language. Karan further divides this motivation into the subcategories of job-related, trade-related, and network-related motivations. This category of motivation echoes the definition of instrumental motivation offered by Gardner & MacIntyre (1991). However, Karan appears to provide a somewhat broader definition than that proposed by the original authors.
- *Social Identity Motivations* – This motivation is related to the desire to identify, or not, with a particular group or person. The four subcategories of this motivation include prestige group-related, solidarity-related, distance-related, or hero/villain-related. This is quite similar to what Gardner and Lambert (1972) term integrative motivation, although these authors do not divide integrative motivation into the same subcategories that Karan proposes.
- *Language Power and Prestige Motivations* – Although Karan notes that there is some reason to argue that this particular motivation type could be combined with Social Identity Motivations, he believes that in particular cases the prestige or power is directly tied to the language itself rather than the group or person who uses the language, and so a separate category is warranted.
- *Nationalistic and Political Motivations* – Language choice resulting from this type of motivation is seen as positioning oneself as a “good citizen” and/or a declaration of loyalty either to a particular nation or in some cases to a particular political party.
- *Religious Motivations* – This type of motivation is in effect when an association has been made between a particular religion or religious being and a language. Karan states that this type of motivation can be a factor in a number of different ways, including when a religious deity is believed to have linguistic preferences, when a language is believed to be sacred, when sacred writings are available only in a particular language, or when the desire to disseminate religious ideas results in choices regarding language behavior.

This Taxonomy of Language Choice Motivations provides a framework by which the motivations that are driving the language choices being made in one indigenous community in Costa Rica can be analyzed.

Research Design Methodology

Research Questions

The purpose of the study is to investigate the motivational factors that determine language choices as well as the relative importance that each of these factors appears to play in the motivation to acquire and use a language, especially in the context of efforts aimed at the maintenance and revitalization of endangered languages. The research questions that will be addressed in the study are:

1. What choices are being made in the community regarding language learning and use?
2. What motivational factors appear to influence language choices in the community?
3. What is the comparative strength of those motivational factors?
4. What impact do participants' language choice motivations appear to have on language revitalization efforts in the community?

Research Setting

The relatively isolated community of Rio Lindo³ is located on a river that in this location serves as a boundary between the countries of Panama and Costa Rica. A majority of the approximately 300 members who live in this relatively isolated community self-identifies as being Bribri, the largest of Costa Rica's eight indigenous groups.⁴ The number of non-Bribri who currently reside in the community is quite small, probably less than three percent. It is difficult to determine an exact number since some community members are from another indigenous group but have married someone within the community and may now identify as Bribri. Only a very few are identified in the community as "outsiders," which means not only are they not Bribri, they are also nonindigenous.

Also unclear is the number of Bribri, not only in Rio Lindo but throughout Costa Rica, who are speakers of at least one of the three Bribri dialects⁵ (Ethnologue, 2005). The last 40 years have seen a growing shift toward Spanish monolingualism in Bribri communities (World Culture Encyclopedia, 2007), and Rio Lindo is no exception. Spanish is currently the language of communication in all language domains within the community, and few community members are bilingual in Spanish and Bribri. The majority are monolingual Spanish speakers (Blackwood, 2009). Within the last decade, English has been introduced into the community more extensively than at any previous time. This is primarily the result of the ecotourism programs that have been established by community members in the expectation of bringing greater financial prosperity to this area, which has long been one of Costa Rica's poorest regions economically. Comprehension and use of

³ The name of the community and the names of all study participants have been changed to ensure confidentiality.

⁴ Costa Rica's indigenous population of approximately 64,000 is small, accounting for 1-2% of its population, the lowest percentage for any nation in Central America. Estimates of the Bribri population range from 9,000-12,000.

⁵ These three dialects are Coroma, Amubri, and Salitre. The first two are spoken mainly on the eastern side of the Talamanca mountain range, and the latter is spoken on the western side.

English, however, is generally limited to simple words and phrases, and typically these are related to some aspect of tourism.

It appears that few children in Rio Lindo are now learning Bribri as their first language. This has been the case in this particular Bribri community since the early 1960s, when the government established a primary school in the community and classes were taught by monolingual Spanish-speaking teachers. Prior to that time, the dominant language of the community was Bribri, although many of the adults were also able to speak Spanish at least to some extent. Today, most, if not all, of those who are able to speak Bribri fluently are in their 60s or older. Rio Lindo currently has both a primary and a secondary school.⁶ In both of these schools the primary language of instruction is Spanish, with the primary school providing instruction in Bribri as a second language⁷ twice a week and the secondary school providing classes in English as a foreign language. Additional funding has been requested from the Ministry of Education to provide instruction in Bribri at the secondary level as well.

Research Participants

- *Students* – Nine students (4 female and 5 male) from the secondary school were interviewed individually. These students were in grades 7-9 and ranged in age from 13-24⁸ years old. Only one student per family was interviewed. While some students indicated that they had lived at some point in their lives in other communities, with the exception of one student, all indicated that those other communities were also located within the Talamanca region and a majority of the students indicated that they had lived their entire life in Rio Lindo.
- *Parents* – Thirteen parents were interviewed for the study. In three interviews both the mother and father were present, resulting in a total of ten parent interviews. All of the parents who were interviewed have children in either the primary or secondary school or in many cases in both schools; however, these parents do not correspond in all cases to the secondary students who were interviewed. The majority indicated that they had never lived anywhere outside of Rio Lindo and all but three parents had lived only in the Talamanca region. Two of the three parents who had lived elsewhere were not Bribri, but had moved to Rio Lindo because their spouse or domestic partner was Bribri. The mothers typically work in the home, in agriculture, and in the community's tourism projects. The fathers work predominantly in agriculture, and a small number also assist with tourism.

⁶ Primary school in Costa Rica is grades 1-6, generally divided into two "cycles," 1st through 3rd grade being known as Primer Ciclo (First Cycle) and 4th through 6th grade as Segundo Ciclo (Second Cycle). At the time of this study, the Rio Lindo secondary school had Grades 7-9, which is known as Tercer Ciclo (Third Cycle). Typically secondary school in Costa Rica extends through 11th grade.

⁷ It is probably more correct to refer to these classes as being Bribri as a foreign language, since students seldom encounter the language outside the classroom.

⁸ Many of the students currently enrolled in the secondary school had finished primary school several years previously and had not had the opportunity to continue their education until a secondary school was established in Rio Lindo in 2006.

- *Teachers* – Five teachers were interviewed: three from the primary school and two from the secondary school. Three of these teachers are themselves Bribri who are able to speak Bribri but aren't necessarily fluent in the language and two are non-Bribri "outsiders" who do not speak the language. The average length of time they have been teaching is approximately 13 years. None of them had spent their entire career working in Rio Lindo.

Data Collection

This study draws on data collected over a three-week period during May 2008 as part of a larger study of language attitudes and practices in a Bribri community in Costa Rica. Data sources include audiotaped semistructured interviews conducted in Spanish with 9 secondary students, 13 parents, and 5 teachers; field notes written for each of these interviews; and observations made of community use of language in a variety of settings at different times, including church services, soccer matches, school recesses, work sites, and community gathering areas such as the soccer field or the dining hall of one of the tourism projects where community members frequently come to use the phone. I conducted all of the interviews and observations.

Data Analysis

Employing Karan's (2008) Taxonomy of Language Choice Motivations as a framework for analysis, the 24 interviews that had been transcribed previously as part of a larger study on language attitudes and practices, as well as the field notes from informal conversations and observations from that study, were examined, and segments of text⁹ which were identified as illustrating Rio Lindo community members' language choices and language choice motivations were coded according to one of the six motivation categories. Although Karan notes that motivations are often "complex and combined," for this study text segments were not assigned to more than one category. Because one of the research questions being explored in this study relates to the comparative strength of each motivating factor, it seemed important to code the text segments in only one category. For each segment, I made a judgment regarding which category the text appeared to best fit.

Ultimately, any overlap between categories was rare, and when it was noted, with the exception of Economic motivation, usually appeared to exist between the two categories with the greatest number of segments assigned to them, rather than between these two categories and the other four. In addition, some text segments were identified that seemed to indicate motivations that did not fit into any of the six motivation categories found in Karan's taxonomy. To accommodate these cases, an additional category of "Other" was created which was later refined further to categorize what I believe are additional motivating factors.¹⁰ Having extracted all text segments from the interview transcripts and grouped them under specific motivation categories, all text was reread to find additional

⁹ This segment of text was often a sentence, but did not necessarily have to be for the purposes of analysis.

¹⁰ The motivations identified as "Other" do not appear to me to fall within any of the motivational categories as described by Karan (2008) in the Taxonomy of Language Choice Motivations. These additional motivational factors included Education and Enjoyment. This is addressed in more detail in the Discussion section of the paper.

text segments that could serve as confirming or disconfirming evidence. It should be noted that indication of a Language Choice Motivation was made in some cases in reference to the participant him/herself, and in other cases to the community in general or to a particular segment of the population such as teenagers.

Findings

The data analyzed in this study provides insight into the language choices and the language choice motivations influencing those choices in an indigenous community in Costa Rica, as well as addressing the impact that community members' language choice motivations appear to be having on language revitalization efforts in the community.

The first research question, which asked what choices community members are making regarding language learning and use, may appear on the surface to be perhaps the simplest of the four research questions. However, analysis of the data indicates that the choices being made are far from generalized across the community, and language choices can vary a great deal from person to person. As a result of the establishment of the primary school in the early 1960s, and subsequent admonishments by the monolingual Spanish-speaking teachers, many parents at that time choose to stop speaking their mother tongue language, Bribri, and start speaking only Spanish in their interactions with their children. This previous language choice has led to the current generation of parents, the majority of whom are not able to speak Bribri and therefore cannot transmit knowledge of the language to their children. Recognition that Bribri is endangered has led to a renewed interest in the language in recent years and has resulted in the inclusion of Bribri language classes twice a week in the primary school and individual efforts on the part of some community members to relearn the language they knew as children, but subsequently lost. As one mother indicated,

nosotros hemos ido aprendiendo porque nosotros ya lo perdimos pero estamos aprendiendo ... no puedo manejarlo, pero he superado mucho porque antes no sabía nada, nada, nada, ahora por lo menos ... casi que la mitad

[we have been learning (the language) because we lost it, but we are learning ... I can't speak well, but I have come a long way because before I knew absolutely nothing, but now at least [where I don't know I use Spanish, but] it's about half]

However, not everyone is as enthusiastic about their heritage language. Evidence of this can be found in the following statement by a father who spoke of his own lack of ability to use Bribri and his choice to spend time studying English. He noted:

yo creo que el inglés es muy importante que sería muy bueno que aprendieran el inglés y el español ... Ahora quieren rescatar el bribri, pero los menores, los jóvenes no lo ven con buenos ojos ... pues ellos mismos están dejando de tercero.

[I think that English is very important and it would be very good that they (the students) learn English and Spanish ... Now they want to rescue Bribri, but the younger people, the youth, do not agree ... the students themselves ... they themselves are putting (Bribri) in third place.]

In every setting where observations were done, including church services, soccer matches, recess, work sites, and community gathering areas, only once was Bribri heard being used. It is evident from interviews and observations that the language of choice in the community is overwhelmingly Spanish; however it is also clear that at least some¹¹ community members are making the choice to learn or relearn their heritage language or a foreign language such as English.

We will now move to an examination of research questions two and three, which attempt to identify what motivational factors appear to influence language choices in the community and the comparative strength of those motivational factors. As Table 1 shows, the primary motivations for language acquisition and use in this community are Communicative and Social Identity Motivations. In this particular context it appears that Language Power and Prestige and Religious Motivations have no motivational power whatsoever, while Economic, Nationalistic, and Other motivations are quite weak in comparison to the two primary language choice motivations.

	Communicative	Economic	Social Identity	Language Power & Prestige	Nationalistic & Political	Religious	Other
Students	22	0	19	0	0	0	7
Parents	13	1	17	0	0	0	8
Teachers	4	4	29	0	2	0	2
Totals	39	5	65	0	2	0	17

Table 1 Rio Lindo Language Choice Motivations

Unlike parents and students, teachers seldom mentioned Communicative motivations as a reason for language choices in the community and they were also the only group who mentioned Nationalistic and Political motivations. It should be pointed out, however, that the two teachers who noted the importance of students knowing and using the official language of the country are the only teachers at the primary or secondary school who are not Bribri and they themselves are unable to speak Bribri. It is unclear from the data collected why this was not mentioned by other participants, although it is possible that those who self-identify as Bribri may identify more strongly with the Bribri indigenous group rather than with the nation of Costa Rica, and therefore would not be as likely to indicate a Nationalistic or Political motivation.

Karan (2008) states that “[P]eople normally choose to use a language understood by their interlocutors” (p. 3). This was a primary motivator for members of the Rio Lindo community. As one secondary student noted, *“En el resto de Costa Rica no (hablan Bribri)”* [In the rest of Costa Rica they don’t speak Bribri], and one of the teachers concurred that *“uno tiene que hablar español para poder tener comunicacion”* [A person has to speak

¹¹ Exact numbers are unavailable.

Spanish in order to be able to communicate]. Communication was also a motivation for at least one secondary student to learn English:

Me gustaría tener clases de inglés también. Vienen extranjeros y uno necesita decirles algo.

[I would like to have English classes too. Foreigners come here and you need to be able to tell them something.]

Although several participants also indicated a need to know Bribri in order to communicate with anyone they might come in contact with who spoke Bribri but did not know Spanish, when asked if they knew anyone who was a monolingual Bribri speaker, no one could answer affirmatively. However, even when confronted with that reality, they still insisted that it was important to know Bribri “just in case.” In a number of cases students also pointed out that one of their parents was a monolingual Spanish speaker. This made speaking Spanish in the home a necessity, even though they did at times speak Bribri with the bilingual parent, although this might be limited to only isolated words or simple phrases.

The strongest Language Choice Motivation was Social Identity, which was mentioned approximately 25 percent more than the next strongest motivation. Text segments identified for this motivator related to both Karan’s subcategories of Solidarity-related and Prestige Group-related motivations. In the case of Solidarity-related motivation, participants indicated a desire to maintain their culture through the use of their language. In expressing their strong belief in the importance of maintaining the language, community members used a variety of terms indicating a desire to “rescue, recover, and preserve” the language as well as terms indicating a sense of ownership such as “our” and “ours.” When asked to give a reason for the need to revitalize the language, emphasis was always placed on the fact that the language was something unique to the Bribri indigenous group, and therefore an important piece of their culture and their identity as a group. Responses repeatedly pointed out that

Es la tradición de la gente siempre... hay que mantener siempre el costumbre y la cultura

[It is always the tradition of the people ... there is a need to always maintain the custom and the cultura]

El grupo indígena habla su dialecto es considerado más indígena.

[The indigenous group that speaks their dialect is considered more indigenous]

When arguing for the use of Bribri in the school, one parent declared that for this community Bribri is important:

Porque el bribri es el idioma de nosotros. Puede ser que uno puede aprender en bribri porque el idioma es de nosotros, no es como español

[because Bribri is our language. It may be that one can learn in Bribri because the language is ours, unlike Spanish]

However, even though the participants appear to articulate a motivation to revitalize the language, there also appears to be a motivation to move away from Bribri and closer to monolingual Spanish-speaking status. Karan terms this a Prestige Group motivation. While this type of motivation can motivate people to choose to use a language, it is also “present when people choose to not use or to not acquire a language variety in order to disassociate themselves with a low prestige group who normally uses that form” (2008, p. 4). No participants identified this type of motivation for themselves, but several noted that others in the community feel a certain amount of shame associated with being indigenous and speaking an indigenous language, which results in their unwillingness to learn or use Bribri. One parent observed that

Mucha gente sabe hablar bribri, pero uno le habla en bribri, no contesta en bribri, solo en español y no sé si es que tienen pena o tienen no sé qué

[Many people know how to speak Bribri, but if you speak to them in Bribri, they don't answer in Bribri, only in Spanish, and I don't know if it's because they are ashamed or they are I don't know what]

And another parent, in speaking of his own children and their apparent shame related to their heritage language, noted:

cuando están aquí en casa pues casi no ellos no le da pena pero fuera de la casa cuando hay personas que hablan español ellos quieren hablar nada más español, es como se dan vergüenza del origen de ellos

[When they are here in the house they aren't really ashamed but outside the house, when there are people who speak Spanish they only want to speak Spanish, nothing else, it's like they are ashamed of their origins]

However, although it is typically young people who are identified as experiencing shame regarding their indigenous heritage and language, this isn't true of all young people in the community. One secondary student asserted:

Nosotros somos indígena y no nos debe dar pena hablar la lengua de nosotros. No me da pena hablar

[We are indigenous and we shouldn't be ashamed to speak our language. I'm not ashamed to speak it.]

Prestige Group-related motivation accounts for approximately 30% of the total number of Social Identity motivations identified, so it would appear from just looking at the numbers that Solidarity-related motivations are much stronger. However, this may not necessarily be the case, for reasons I will discuss later in this paper.

The final research question looks at the possible impact participants' language choice motivations may have on language revitalization efforts in the community. It is difficult to measure impact with any degree of certainty using the limited data available here; however, it appears that Social Identity motivations may have the greatest impact on language revitalization efforts. It is clear that in actuality Bribri is not necessary for communication and no other motivation is indicated as a factor for revitalizing the language except the desire of community members to preserve a part of their culture.

Discussion

The data analyzed for this study provide an indication of both the language choices and the motivations for those choices in a Bribri indigenous community in Costa Rica, as well as touching on the possible impact those Language Choice Motivations may have on language revitalization efforts. It is evident from statements made by the participants that community members have a positive attitude toward languages and language learning and a desire, at least in theory, to know more than one language. For a few participants this positive attitude has translated into motivation to learn English or to learn or relearn Bribri; however, this is not always the case, possibly due to conflicting motivations. It became apparent in conducting the analysis that a simple tally of the number of mentions of a particular Language Choice Motivation was not sufficient to grasp the actual strength of a particular motivation. Using the limited data available, it is not possible to quantify the strength of each individual token. It became clear that a data collection instrument specifically designed to measure language choice motivations in an indigenous context would be necessary in order to capture the nuances related to the motivational strength which appears in this study, as well as to give a clearer picture of the motivations at work in the community. The findings showed few references to Economic motivations; however, from my observations I believe that this is a greater motivating factor than what was indicated. All three subcategories of Economic motivations—job-related, trade-related, and network-related—appear to be factors in the choice to use Spanish as a primary language of communication, as well as in the choice to learn English. However, a simple tally of text segments by motivational category does not clearly reveal that fact.

The findings provided here also demonstrate the possible need for further expansion of Karan's Taxonomy of Language Choice Motivations. I identified two additional motivations that Karan does not appear to address. These two motivations are Education and Enjoyment. In the case of Education, participants indicated the necessity of knowing Spanish in order to become educated, since this is the language of instruction in schools, and most books are in Spanish. While I believe Karan would link this to job-related motivation that does not appear to be the case in this community, since labor is largely agricultural in nature and this motivation appears to be focused more on being able to identify oneself as an educated person rather than on the benefit of education for future job prospects. The other motivation I identified which Karan does not include is Enjoyment. In this case, it is related to the fact that it is not unusual in Central America for people to have a hobby, and for some people that hobby is learning languages. Their motivation for

learning and using¹² a particular language stems from the simple fact that it is enjoyable for them to do so, and not necessarily the idea that it will benefit them in a particular concrete way. Further research is necessary to verify the validity of claiming that these two additional motivations exist as separate categories from those already proposed by Karan.

Perhaps the most important finding of this particular study is the need to emphasize cultural connections as a way to enhance the chances for success in efforts at language revitalization. Unlike Casesnoves Ferrer and Sankoff's (2003) study in Valencia, Spain, identity does not appear to be the primary determinant of language choice in Rio Lindo, since identification as Bribri does not necessarily translate into language use. It does appear, however, that cultural identity is the only real motivation for choosing to learn or relearn the Bribri language.

Conclusions and Limitations

As pointed out at the beginning, relatively little research has investigated the relationships between language choice motivations and language revitalization efforts. This study has made a modest contribution to an understanding of this area of investigation, but considerable research is still necessary to create a robust research base that can give a clearer picture of the complex connections that appear to exist between motivation, language choice, and language revitalization efforts. The findings reported here, of course, need to be interpreted with caution because the number of participants was limited and restricted to only one community. The region of Talamanca in which the community of Rio Lindo is located is extensive and includes many different communities of Bribri speakers. Language choice motivations are likely to vary within and among those communities. The limited scope of the current study prevented an exploration of those potential differences across a larger section of the indigenous population. Future research in the following areas can help to expand on the findings of this study and provide a fuller understanding of language choice motivations and their connections to language revitalization:

1. What instruments can be used to most accurately measure language choice motivations?
2. What patterns of language choice motivations are present across Bribri indigenous communities in Costa Rica?
3. How can those who are responsible for efforts to revitalize a language capitalize on the language choice motivations indicated by community members?

I believe that this type of research has the potential to provide information that can inform decisions related to efforts to maintain revitalize endangered languages and contribute toward making the preservation of these languages a reality.

¹² In reality, actual use of a particular language may not be possible. For example, a person may learn some Japanese or Russian, but the lack of available interlocutors often prevents use of the language for interaction.

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Perspectives on literacy: Exploring functional vs. sociocultural views on adult literacy learning in the case of Uganda

Sarah Hasaba

Abstract

Illiteracy remains a global concern, especially among developing countries like Uganda. The 1990 World Education Conference in Jomtien, Thailand drew attention to the increasing number of illiterate individuals in the world, especially in developing countries. Consequently, the Education For All (EFA) campaign was launched, with UNESCO spearheading it. The campaign urged both developed and developing countries to invest in improving literacy and education levels among children and adults. The support for universal primary education has been enormous, with the United Nations putting forward eight Millennium Development Goals in 2000 to be achieved by 2015; goal 2 emphasizes universal primary education. This paper explores adult literacy promotion as an EFA effort and presents UNESCO's drive for functional literacy. It also presents the Ugandan government's Functional Adult Literacy Program and juxtaposes it against other alternative approaches to literacy learning, such as the social and sociocultural views of literacy. Findings from research conducted in 2006 and 2011 on the Functional Adult Literacy Program in Uganda not only point to program challenges limiting its effectiveness, but also call for a social approach to implementing any adult literacy program.

Introduction

Illiteracy remains a global concern because of its effect on socioeconomic development among individuals in developing countries like Uganda. The 1990 World Education Conference in Jomtien, Thailand drew attention to the increasing number of illiterate individuals in the world, especially in developing countries. Consequently, the Education For All (EFA) campaign was launched, and had the United Nations Education, Science and Cultural Organization (UNESCO) spearheading it by calling upon both developed and developing countries to invest in the fight against illiteracy among children and adults. UNESCO's global statistics reveal that one in five adults is illiterate and that "literacy remains among the most neglected of all education goals, with about 759 million adults lacking literacy skills, a majority of whom are women and in sub-Saharan Africa" (UNESCO, 2010, p. 4). Furthermore, UNESCO supports the view that "literacy opens doors for better livelihoods, improved health and expanded opportunity" (UNESCO, 2011, p. 65).

This paper explores adult literacy promotion efforts as part of the broad Education For All campaign and presents UNESCO's drive for the functional version to literacy. It also discusses the Ugandan government's Functional Adult Literacy (FAL) Program and juxtaposes it against other alternative approaches to literacy learning such as the social and

sociocultural views of literacy. Qualitative research data collected from among Functional Adult Literacy Program learners in 2006 and 2011 will further inform this discussion.

The Functional View of Literacy

At its simplest level, literacy has been defined as the ability to read and write and spell correctly (Blake & Blake, 2002, p.13; Okech, 2004, p. 178). Alphabetic subskills as well as functional views of literacy are built upon this base, commonly assuming a linear progression from simple to more complex functionally relevant skills. However, as Jeffrey & Maginn (1979) argue, to “confine the definition of literacy to merely the ability to read and write implies a narrowest possible view of looking at literacy” (cited in Hamilton, Barton & Ivanic, 1994, p. 107). Street (1984) refers to the two models (autonomous and ideological) in his definition and understanding of literacy. All literacy is ideologically constructed, although individuals choose to set standards and limitations about what comprises literacy and who is literate/illiterate. The autonomous model is a “division between literate and nonliterate and it is not discriminative between cultures but simply between technologies” (p. 29). It supposedly involves neutral and context-free technologies.

The functional view of literacy falls under the autonomous model. It was developed in the 1950s and 1960s. It is skills based, tending to focus on the deficiencies that exist in society and the need to respond to particular deficiencies with skills training. Gray (1956), for instance, wrote about functional literacy as “someone being functionally literate if they are able to engage effectively in all those activities in which literacy is normally assumed in [their] culture or group” (p. 24). UNESCO (1970) advanced this concept of literacy as that which aids “humans in the performance of their functions ... most important of which is that of being a producer” (p. 27).

Literacy under the functional view is considered a tool and/or a measure of performance and competency, and individuals are assessed as either competent or incompetent as a result of engaging in this kind of literacy. This kind of literacy advanced by UNESCO paid attention to the mechanical aspect of functional literacy, where having skills and updating them were a prerequisite for active adult participation in individual communities. A mechanical view of literacy lacks the understanding of individuals within sociocultural contexts. These conflicting views of functional literacy led UNESCO to reinvent their version of literacy. During a “UNESCO conference in Tehran in 1965, functional literacy was tied directly and tightly to economic functions” (Bhola, 1994, p. 32). However, even with reinvention of functional literacy by UNESCO, there were still questions surrounding the idea of functional literacy. In particular, there was a failure in a functional literacy viewpoint to recognize the importance that cultural settings played in the way individuals responded to literacy provision.

In the years between 1967 and 1974, UNESCO organized an Experimental World Literacy Program (EWLP). Gillette (1987) writes about this worldwide UNESCO approach to literacy as “an unprecedented, and remained in educational history an unequalled, multilateral literacy venture in terms of international resources mobilized, political and technical interest aroused, and controversy unleashed” (p. 197). UNESCO attempted to develop one approach to literacy provision that involved the world as one big classroom where testing and demonstration of assumed literacy training was to take place. This same

concept is used in Uganda whereby the government is pushing for a national adult literacy program for its own sake, without reflecting on the would-be deep-rooted social impact on individuals and how they choose to use and sustain the acquired literacy skills within their local communities. Uganda's Functional Literacy Program is discussed in the next section.

The Government's Provision of Functional Adult Literacy (FAL) in Uganda

The Government's FAL Program has its roots in the functional version of literacy introduced and promoted by UNESCO. UNESCO played a big role in the reintroduction of Uganda's Functional Adult Literacy Program, including through a "number of planning workshops held in 1983, 1987 and 1989, co-financed by the Government of Uganda and UNESCO" (Okech, Carr-Hill, Katahoire, Kakooza & Ndidde, 1999, p. 12). The government's Ministry of Gender, Labour and Social Development (MGLSD) is responsible for the FAL Program and defends this view of literacy as vital in improving learners' lives:

A participatory approach that would motivate learners to continue searching for knowledge and skills that would help them to improve on whatever activities they were engaged in for the betterment of their lives and the communities where they lived. (MGLSD, 2001, pp 1-2).

This literacy discourse places emphasis on individuals obtaining skills that would enable them to actively improve their lives. It is also worth mentioning that the implementation of the FAL Program as an informal program began in 1992 following a pilot adult literacy project in eight districts of Uganda—Apac, Hoima, Kabarole, Mpigi, Mbarara, Mukono, Iganga and Kamuli—in the same year. This adult literacy project was known as the Integrated Nonformal Basic Education Pilot Project (Infobepp). The October 1995 Process Review of this pilot project by an international team of experts revealed in the form of conclusions and recommendations the "very strong demand" as well as the need for a "decentralized" program approach:

There was an overwhelming demand for adult literacy at all levels evidenced by the fact that there were almost as many literacy classes outside the pilot project areas which had sprang up because of the strong demand for literacy as a result of the raised awareness and expectations ...

There should be a decentralized program structure that complements the political process with clear definition of roles of the centre and the districts. (Okech et al., 1999, pp. 15-16)

The government's response to the overwhelming demand started with a name change of the literacy program from Integrated Nonformal Basic Education Pilot Project (Infobepp) to the National Functional Adult Literacy Program (Okech et al., 1999, p. 7). Then adult literacy became part of a poverty reduction strategy that is supported by the International Monetary Fund (IMF). The World Bank's "1995 paper on strategies for education, acknowledged the problem of illiteracy among the poorest people of the poorest countries and the need to provide the kinds of education that would work to reduce their poverty" (Carr-Hill, Okech, Katahoire, Kakooza, Ndidde & Oxenham, 2001, p. xi).

Although the World Bank analysis does not specifically mention adult literacy learning, I think that some of the underlying challenges to socioeconomic development involve lack of education and literacy skills. So the FAL Program, linked to economic skills and poverty reduction efforts, ensured that Uganda would continue implementing the UNESCO version of literacy; a version central to understanding and implementing the IMF/World Bank's structural adjustment policies (SAPs) that promised the improvement of people's socioeconomic situations in developing countries.

The Government of Uganda continues to acknowledge the presence of and challenges posed by adult illiteracy in the country (MGLSD, 2003a). The current adult literacy level for individuals aged 15 years and above stands at 73 percent (Uganda Population Secretariat, 2011). Therefore, the FAL Program as a national literacy program with potential for country-wide coverage is implemented under three levels of Ministry, District and Subcounty. Some of the roles of the Ministry include policy formulation and development, and program design, development and implementation, as well as networking with other actors in the area of adult literacy (MGLSD, 2001, p. 4). At the District and Subcounty levels, the FAL Program falls under the Department of Community-Based Services. A District Community Development Officer (DCDO) and Subcounty Community Development Officer (SCDO) are appointed to oversee activities within the District and Subcounty. The Department of Community-Based Services is comprised of six sectors: (i) Child Care, (ii) Youth (iii) Culture, (iv) Gender and Women in Development, (v) The Disabled and Elderly, and (vi) Labour.

Stages within the FAL Program

The FAL Program has three stages. Stage one is the beginners' stage where adult learners receive 180-226 contact hours with the literacy instructor and is equivalent to nine months of study. Stage two is another nine months with the same contact hours as stage one. Stage three, introduced in 2006, has 150-180 contact hours between adult learners and their literacy instructor. However, not many literacy instructors have enrolled learners in this stage. Upon completion of each stage, learners are required to take a proficiency test, which determines whether or not they can proceed to the next stage. The government program stipulates that learners are to have six contact hours per week.

It is envisaged that upon successful completion of the three stages in the FAL Program, adult learners' competency will be equivalent to the primary four level of formal schooling in Uganda. The same goal was put forward by Ngatjizeko (2005) with respect to adult learners participating in Namibia's national literacy program.

Language(s) of Instruction

Given that the FAL Program addresses adult literacy as a community development effort, instruction in the literacy class is in the local language of the community. Uganda has many different tribes so learners are expected to be familiar with the local language. Across Uganda, the seven languages used for instruction under the FAL Program are Luganda, Luo, Lunyankole, Lukiga, Lutoro, Ateso, and Lukonjo. This selection, based on the large numbers of people speaking these languages, has not been contested in the FAL Program. Ladefoged, Glick & Criper (1971), writing on language in Uganda, mention that "language has to serve

as a mother tongue or first language to at least 55 percent of the population” (cited in Carr-Hill et al., 2001, p. 6). The mother tongue is used in the community and at home.

Also, some of these languages used in the FAL Program are media languages in that there are newspapers published and radio programs aired in them. However, English remains the official and business language in Uganda, and stage three of the FAL Program aims to teach adult learners functional English, even though the learners continue learning in the local language.

The FAL Program Curriculum

The printed 2003 copy of the FAL curriculum, designed and developed with the assistance of experts, focuses on such areas as “health, legal issues, agriculture, cooperative and marketing, animal husbandry, gender issues, culture and civic consciousness as well as language” (MGLSD, 2003b, p. 3). As a government document, the Ministry proposes that the FAL curriculum

presents the learner with an opportunity for learning through problem solving for sustainable self and community development. It also encourages the learner to develop positive attitudes towards learning and work through practical activities. (MGLSD, 2003b, p. 4)

However, a Process Review conducted between 2002-2006 on the FAL Program recommended some of the following:

The revision of the FAL curriculum and materials for more relevance to learners’ needs and the poverty eradication efforts; develop links between literacy learning and practice so as to promote beneficial literacy use in the home and the community and at work. (MGLSD, 2008, p. 63)

This is the second process review on the FAL Program since its inception in 1992. The quality of the literacy program and its relevance to learners in their everyday life is significant.

The Literacy Instructors

Literacy instructors are volunteers from the wider community who enroll in an “initial training in adult literacy methods that lasts ten days and is usually followed by a one-day follow-up training” (Kisira, 2005, p. 67). Although both men and women are encouraged to volunteer as instructors, most literacy instructors are men, as are the literacy implementers. Socioeconomic and sociocultural factors still marginalize women and restrict their mobility and time. Those who go on to become literacy instructors receive at the end of the training an instructor’s manual, literacy primers for the learners, a blackboard, and chalk. In some instances, literacy instructors—usually males—receive logistical support in the form of bicycles to facilitate their work in their community. There is no financial remuneration for literacy instructors.

Through talking to some of the FAL instructors during both the 2006 and 2011 fieldwork research activities, I found out that most taught the first two stages of the program. The quality of FAL instructors in the literacy program and the length of training they undergo are criticized. Kisira (2005), of the Literacy and Adult Basic Education (LABE)¹ organization in Uganda, writes that “technical support to instructors, in terms of supervision, is inadequate. It is therefore of no surprise that the quality of adult literacy provision is generally very poor” (p. 67). The credibility of the FAL Program is therefore questionable, as it appears that little attention is being paid to the quality of the literacy service on offer.

Beyond a Functional Understanding of Literacy

There are many other schools of thought, besides the functional understanding of literacy, that have emerged and that define and understand literacy from a social or sociocultural viewpoint. The discussion in this section focuses on the social/ideological view of literacy as well as the sociocultural view of literacy.

Social/Ideological View of Literacy

The ideological model emphasizes literacy around values and contexts. Street (1984, p. 96; 1993, p. 7) asserts that “there are multiple literacies that exist and that the meanings and uses of literacy practices are specific to cultural contexts.” He argues further for the “cognitive aspects of reading and writing to be understood within cultural wholes and also within structures of power” (Street, 1984, p. 96). Street emphasizes a social positioning of literacy learning. Within the structures of power and the FAL Program implementation at the Subcounty level, there are parishes and villages. The FAL classes are held at the village level, which administratively in Uganda is the lowest level, while the central government under which the Ministry of Gender, Labour and Social Development falls is the highest level. Literacy classes held at the village level are meant to enable adult learners to access them. Adult learners are in fact encouraged to select venues for learning as a way of involving them in the literacy program.

The social/ideological view recognizes the various dimensions of literacy learning. Grant (1987) writes that “literacy involves the four dimensions of language use; reading, writing, speaking, and listening, together with thinking which is integral throughout” (p. 11). Also, the acceptance of varying definitions of the term *literacy* indicates the flexibility in concept. Mace (1992) notes that “meanings and uses of literacy and equality have shifted with different social and historical contexts” (p. 141). Literacy is not simply about learning to read and write one’s name or identify numerical values, as is often the case in the FAL classes and is also a notion held by most first-time adult learners. Rather, literacy is a relative concept associated with specific contexts, places, and times. Although functional skills-based views assume that literacy moves from basic to advanced levels, this is problematic, as there is no universal meaning, definition, or understanding attributed to the term. Grant (1987) writes that “literacy is ... not the attainment of a particular level of

¹ LABE is an indigenous, national-level adult literacy training NGO that focuses on literacy, operates a literacy resource organization, offering literacy management, training of trainers and literacy instructors, consultancy and materials development for NGOs, CBOs and government departments.

mastery” (p. 11). Wickert (1989) also defines literacy as “a ‘moving target’ which evolves and changes as individuals and communities constantly redefine what it means to be literate” (cited in Macdonald, 1993, p. 7). The definition and understanding of literacy extends beyond just developing reading and writing skills.

Literacy can be remodeled to meet the changing needs of the learners. For example, in the 2011 research data used in this discussion, learners that were interviewed expressed a desire to be computer literate, an issue that is not included in the FAL Program curriculum. This desire is an indication of the changes in learning needs of the learners and the fact that they feel inclined to take charge of their own learning in order to make it more relevant for them. Chlebowska (1990) refers to “literacy as a factor of personal enrichment and at the very least a right to which everyone must have access” (p. 53). The success of literacy uses depends on how people interconnect literacy with their everyday life in order to be fulfilled. By contrast, if there are disconnections between literacy learning and the experiences in learners’ lives, it is impossible for them to discuss the personal as well as social and sociocultural benefits of literacy.

Literacy Events and Literacy Practices

The social/ideological view appreciates the role of literacy events and practices. Literacy develops through events and practices. Heath (1983) refers to a literacy event as an occasion where “writing is integral to the nature of ... interactions and ... interpretations of meaning. Reading is a social activity that almost always provokes narratives, jokes, sidetracking talk, and active negotiation of the meaning of written text” (p. 200). In a literacy event, literacy is not a set of skills but an occasion in which individuals make meaning with written text. The cognitive skills that people bring to a literacy event and the associated practices they develop influence the meanings they make of their experiences. Adult learners are often encouraged to share their wealth of experience in literacy classes so as to make learning an enjoyable activity.

Literacy practices, on the other hand, form part of everyday life and understandings of literacy. Barton (1994) explains literacy practices as “general cultural ways of using reading and writing which people draw upon in a literacy event” (p. viii). Street (1995) discusses the role of social interactions in literacy learning, asserting that “literacy itself varies with social context” (p. 53). The value is in the ordinary resources that learners draw upon to motivate their learning. Community activities such as village meetings, religious services, political gatherings, or visiting the local health unit provide opportunities for individuals to encounter literacy activities and be part of them.

Furthermore, Street (1996) writes that literacy practices as part of people’s lives “remain social and cultural practices, which are related to people’s cultural identity, their sense of self, their knowledge and world view” (p. 8). Literacy practices provide individuals with a link to the wider community through the new and varied information they encounter. People differ in their experiences of the world, and use their cultural constructions to better understand their world. Therefore, literacy has to be continuous to allow individuals to progress beyond the basic level to more advanced levels of understanding that allow them to compose meaning in their participation within literacy discourses. One observation noted from the learners interviewed in the 2011 research

study is that many of them who are in the post-literacy stage stayed on in the literacy classes for as long as possible. This is because the literacy classes are events that allow them to fully participate and in turn sustain their acquired literacy skills.

Literacy: An Inseparable Entity from Everyday Life

Literacy means many different things according to time, values, place, viewpoints, and contexts—so much so that the terms *literacies* and *multiliteracies* have become commonplace. Literacy does not have to be imposed in terms of when and what skills an individual should possess in order to fit into society. Different societies have different constructions of literacy. “Literacy is taken to mean an educated state that can be achieved through the exercise of literate skills” (Levine, 1986, p. 22); Taylor & Dorsey-Gaines (1988,) assert that literacy cannot mean “a discrete event, nor a package of predetermined skills” (p. 201), as was the case with the UNESCO version of functional literacy.

Furthermore, it is necessary to take into account that literacy is “associated with various implications and discourses” (Christie, 1990, p. 2). Discussions about the meaning of literacy go beyond literacy being skills based, especially given newly emerging domains of literacy “such as computer literacy, workplace literacy, functional literacy, family literacy, and critical literacy” (Suda, 2001, p. 1). Barton (2007) explains, “it is important in making central the idea that literacy is a relative matter, relative to a particular society or group” (p. 190). This makes clear that there can be no claims to universal literacy, as the meaning, definition, and understanding of literacy involves articulation, and the realization that to be literate is an individual journey and a lifelong investment with coherence and progression. Literacy learning, according to Grant (1987), involves “the whole person and is inseparable from the way we live our lives” (p. 9). Indeed, in “a literate society, reading and writing are used for real communicative purposes” (Luke, 1988, p. 9). Heath (1983) notes that in “any literacy activity, there is an opportunity to use reading and writing for different purposes” (pp. 258-259). Taylor (1997) outlines some of these different purposes of reading and writing: “reading can take the form of conformational, educational, environmental, financial use and writing can be for autobiographical, creative, educational, environmental purposes etc.” (pp. 181-182).

Essentially, literacy can be about an individual’s history, capability, and possibilities, as well as about the four roles of code breaking meaning making, text usage in social contexts. and text analysis (Luke & Freebody, 1999):

Breaking the code of text: where as a learner, recognizing and using the fundamental features and architecture of written texts include: alphabet, sounds in words, spelling, conventions and patterns of sentence structure and text.

Participating in the meanings of texts: understanding and composing meaningful written, visual and spoken texts from within the meaning systems of particular cultures, institutions, families, communities, nations and so forth.

Using texts functionally: traversing the social relations around texts; knowing about and acting on the different cultural and social functions that various texts perform both inside and outside school and knowing that these functions shape the way

texts are structured, their tone, their degree of formality and their sequence of components.

Critically analyzing and transforming texts: understanding and acting on the knowledge that texts are not neutral, that they represent particular views and silence other points of view, influence people's ideas. (pp. 6-7)

Successful literacy learning requires these four roles, which are integrated in a successful reading activity. I doubt if the training that the literacy instructors undergo equips them with the ability to guide the learners to integrate the four roles in such a way that they both decode and encode—"reading the word and the world" (Freire and Macedo, 1987), and relating written language to the realities of their lives.

The meaning-making role is vital for learners in the FAL classes if they are to connect literacy learning with growth and development in their communities. In the role of text user, learning is about the kind of text used in the world and recognizing its importance. For example, in the 2006 research, one learner wanted to understand a land title and learn how it is used in relation to her life; otherwise, she could easily have been a victim of print. She will not have personal agency and that makes understanding text extremely difficult. An adult learner should be able to ask questions of print at the whole-text level, and not just be a passive recipient of that text. The learner needs to identify how texts are used in the world and use this knowledge in their everyday lives.

Extending Literacy into a Sociocultural View

The social view of literacy is flexible, thus allowing for different dimensions to influence the definition and understanding of the term *literacy*. The sociocultural view of literacy is not any different, as it embraces diversity in its recognition of individuals and social practices as central to understanding literacy. This section acknowledges the role of the new literacy studies—ethnographic and cross-cultural studies—in shaping the different understandings of literacy/literacies away from a single definition.

New Literacy Studies: Ethnographic and Cross-Cultural Understandings of Literacy

Ethnographic and cross-cultural research studies view individuals and social practices as central to understanding literacy. Ground-breaking research studies by Cole & Scribner (1981) of the Vai people of Liberia and Heath (1983) of three communities in the Piedmont region in the southeastern United States documented new understandings of literacy. Cole & Scribner's study reveals that "literacy is not simply a matter of learning how to read and write a particular script but rather in a much broader sense of being able to apply knowledge for specific purposes in particular contexts of use" (p. 236). Heath's ethnographic study demonstrates that "there is no universality to literacy, there are many literacies. To describe only one set of uses and functions is to miss the myriad other uses and functions among the literacies of communities throughout the world" (cited in Collins & Blot, 2003, p. 44). I will share three Ugandan examples as a way of demonstrating that the success of literacy learning programs depends on specific purposes and context.

First I will describe the REFLECT approach by Action Aid International, a British development agency operating in Uganda. REFLECT (Regenerated Freirean Literacy

through Empowering Community Techniques) is a sociocultural approach that relies heavily on community initiative. REFLECT aims “to integrate literacy and numeracy teaching with broader efforts to stimulate development locally and to address communities’ social and political concerns” (Barton, 2007, p. 192). REFLECT is a contextualized way of drawing together literacy uses in people’s lives aimed at socioeconomic transformation. Uganda is one of three countries (Bangladesh and El Salvador are the other two) in which Action Aid International pioneered the REFLECT approach in the 1990s. Some selected districts in western Uganda were used for the program. The success stories that resulted from implementing REFLECT as a community-empowering tool affirmed the importance of context in literacy promotion activities.

Second is the ABEK approach (Alternative Basic Education for Karamoja), which is designed to adapt to the migratory nature of the Karamojong people. This approach was initiated and implemented in Karamoja region in the northeastern part of Uganda (Nyamugasira, Aanyu & Robinson, 2005). The Karamoja region is characterized by limited use of reading and writing, or low literacy, and is occupied by the ethnic minority communities of Dodoth, Jie, and the Karamojong, who practice agropastoralism; this region has, since the attainment of Ugandan independence in 1962, been lagging behind the rest of the country in terms of socioeconomic development (Jjuuko, Kwiri & Okech, 2010). A number of Adult Basic Education programs have been initiated and supported in the Karamoja region to address the problem of poverty by tackling the issue of illiteracy. Also, several development-related NGOs and development partners are operating in the region, supporting a number of literacy and skills development initiatives (Jjuuko et al., 2010).

Finally, there is the implementation of the FAL Program in the Ugandan district of Kalangala by the MGLSD, with assistance from the Icelandic International Development Agency (ICEIDA). Kalangala is a fishing community, and it is hard to reach it for service delivery. The support from ICEIDA was timely, and driven by Iceland’s experience with its own fishing communities. In two phases (2002-2005 and 2005-2010), the project aimed to tackle the demographic, geographic and economic challenges of the district by empowering individuals with literacy skills, among others. There are notable successes and lessons learned from this MGLSD/ICEIDA collaboration that are deemed replicable in other parts of the country (Mabuya, Odedo & Gidudu, 2010) where the government runs the FAL Program. During the 2006 data collection period, a number of adult learners made mention of the Kalangala district experience. They felt inspired by the stories coming out of the FAL Program classes in Kalangala district. These stories were shared through a radio program every Sunday afternoon, to which many of the learners tuned in to listen. The learners went on to express the desire to visit these classes and learn from these “successful” adult learners.

These three examples demonstrate the existence of multiple literacies that are influenced by different sociocultural contexts. These experiences demonstrate the uniqueness that individuals and societies bring to literacy. There are diverse and specific uses of literacy, a complexity that is overlooked by the functional literacy approach. Indeed literacies are learned and sustained in situations of use. The application of literate knowledge to specific contexts demonstrates the role of literacy practices in individual lives, and “whichever forms of reading and writing we learn and use, they are associated

with social identities, expectations about behaviour and role models” (Maybin, 1994, p. 140).

Ethnographic and cross-cultural studies have grounded the understanding of literacy within the social contexts of individual lives. The individual as a learner has the power to construct meaning, and as a result many literacy scholars have agreed that “approaches to literacy education assume that the meanings of words and texts cannot be separated from the cultural and social practices in which and by which they are constructed” (Rowan, Knobel, Bigum & Lankshear, 2002, p. 88). Literacy has to be understood and examined within sociocultural contexts taking into account events and practices that influence individual learners’ purposes and ways of learning to read, write and communicate. Socially, context and practices influence the definitions and understanding of literacy.

Research Study and Methodology

The data used in this discussion was collected in 2006 and 2011 respectively as part of two separate qualitative research studies on the Functional Adult Literacy Program in Uganda. In 2006, my research was guided by the three themes of literacy learning, poverty reduction, and empowerment of FAL Program learners. I visited two village literacy classes in the subcounty of Kituntu within the district of Mpigi in central Uganda. Structured interviews were used for data collection from six adult learners and 2 literacy instructors. In 2011, as part of my postdoctoral research into suggesting alternative ways of making literacy learning more sustainable for adult learners in their rural communities, 114 adult learners were selected from three districts of Jinja, Iganga, and Kamuli in eastern Uganda. Questionnaire interviews were used for data collection, and the data was analyzed both qualitatively and quantitatively, although most of the information in this discussion is presented quantitatively.

Results

1) *What are the benefits of being literate?*

The adult learners interviewed in 2006 and 2011 shared the information shown in Chart 1 below.

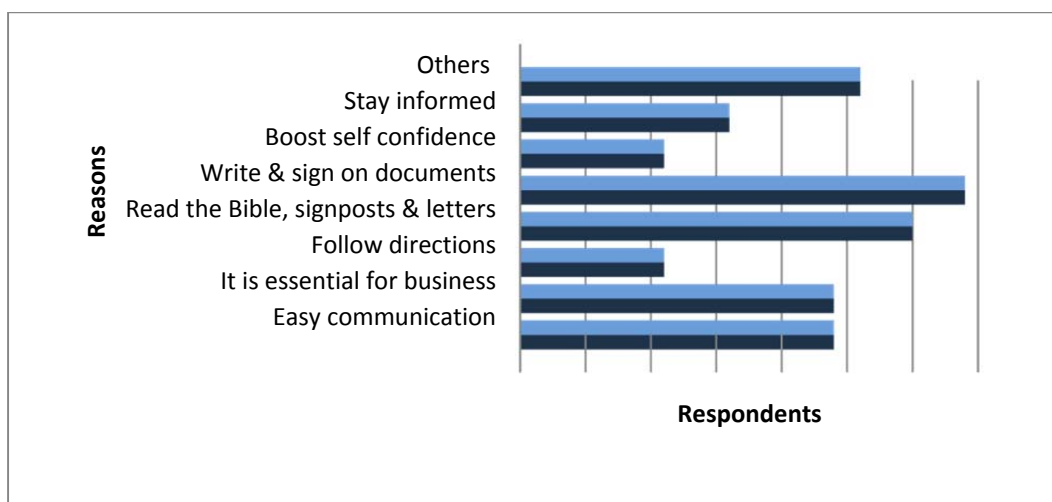


Chart 1: Benefits of literacy

A majority of respondents indicated the ability to write and sign documents as the first benefit of being literate. This was followed by being able to read either the Bible, for those who are Christians, or signposts and letters. Adult learners also mentioned other benefits which I termed as “others;” these include operating a mobile phone, assisting children with their homework, participating in voting, getting a job, improving sanitation, personal growth, home improvement, banking, and keeping confidential information. Literacy as essential for business and for making communication easier was also mentioned. The power of literacy in learners’ lives is clearly identifiable, and it is appreciated as a communicative purpose.

2) What are the reasons for needing literacy skills?

This question was asked of adult learners in 2011 and their responses are shown in chart 2.

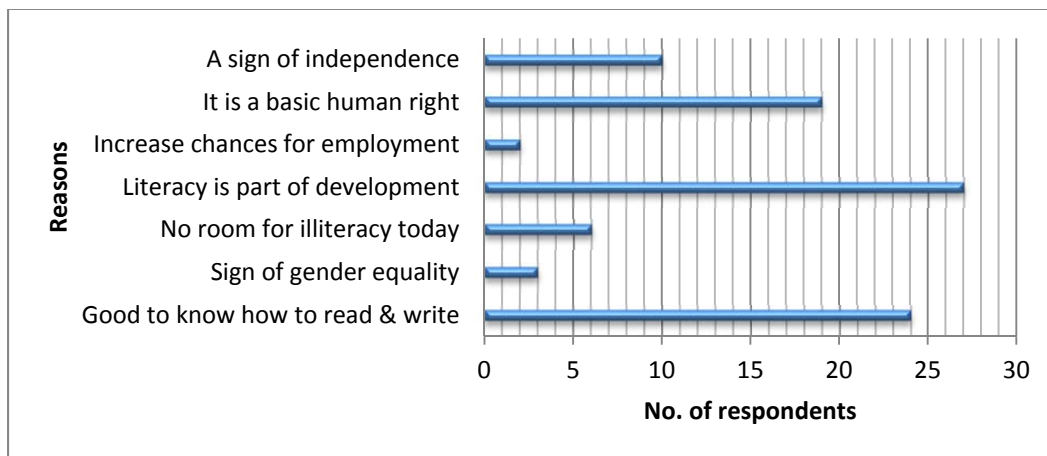


Chart 2: Reasons for needing literacy

In chart 2 above, adult learners’ first reason for needing literacy is because literacy is viewed as part of development. This reason is closely followed by the appreciation of the ability to read and write. Literacy as a basic human right as well as a sign of independence were also voiced. Literacy learning is important to these learners, and the value and the different uses that are attached to being literate in society have clearly been shown in chart 2. These reasons are also interlinked and form a justifiable cause to support literacy learning in their communities.

3) What are the positive attributes of the FAL Program?

The collective examination of adult learner responses from 2006 and 2011 showed that the fight against illiteracy received an overwhelming majority of responses as a positive attribute of the FAL Program, as shown in chart 3 below.

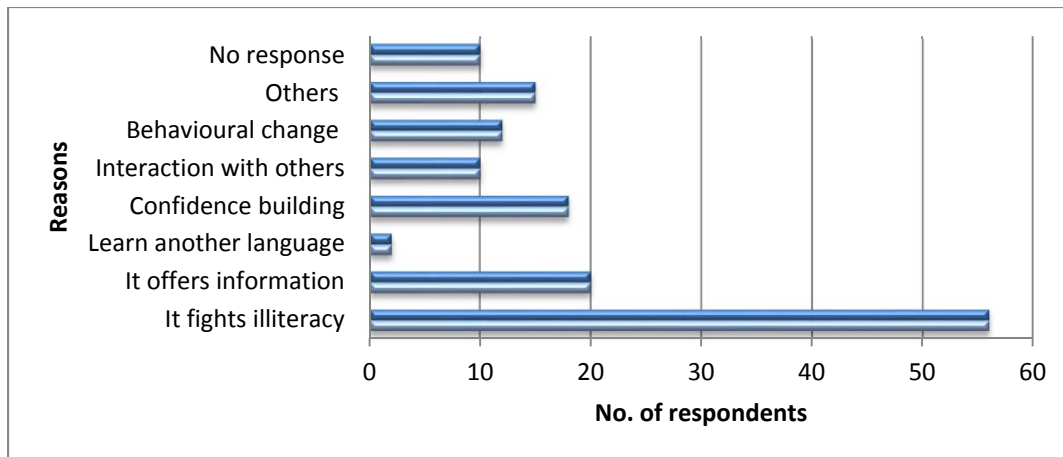


Chart 3: Positive attributes of the literacy program

Also indicated in the chart, the FAL Program offering information and building confidence among adult learners were viewed as the second and third most positive attributes. The fourth and fifth were interacting with other learners and behavioral change. The responses classified as “others” include such reasons as the program being interesting; the program offering free learning; learning relating to everyday life; knowledge on caring for the family is shared; acquisition of better communication skills; drafting of confidential documents; and learning about village banking. In a way, the benefits of literacy and the reasons for needing literacy mentioned earlier may have influenced the adult learners’ responses to the question concerning the positive attributes of the FAL Program.

4) What are the negative attributes of the FAL Program?

Again, adult learners in 2006 and 2011 shared their views, as shown in chart 4. Although more than 40 respondents were of the view that there was nothing wrong with the literacy program, 30 individuals whose responses are classified as “others” mentioned some of the following issues: Walking long distances to class, employment upon completion is not guaranteed, no remuneration for literacy instructors, missing of classes during rainy seasons, learners coming late to class, no opportunity for further training, absenteeism, the program does not address our local problems, and lack of facilitation.

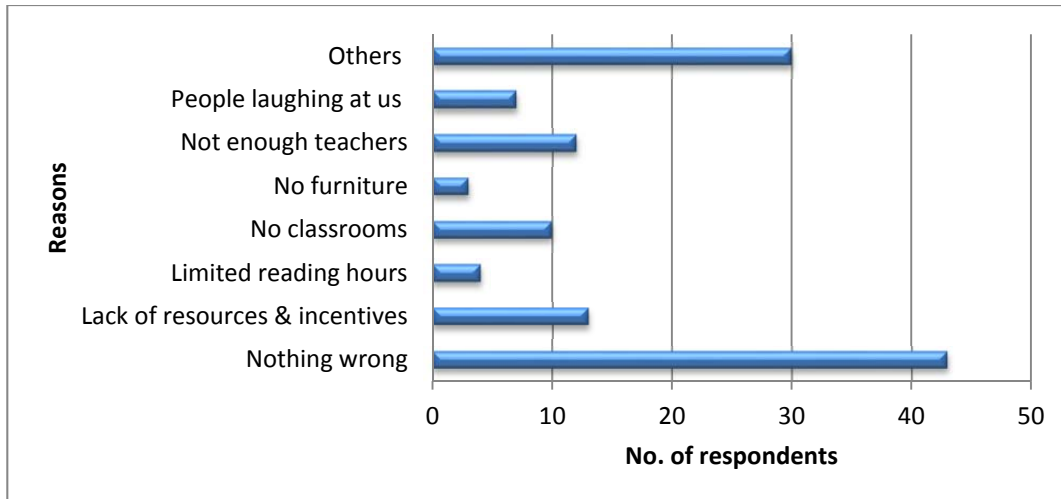


Chart 4: Negative attributes of the program

The other reasons as shown on the chart include lack of resources and incentives, not enough teachers, and no classrooms. Interestingly, this data collected in two different regions of the country and in different years still reflects the same negative attributes shown in chart 4. The existence of these negative attributes is affecting the literacy program's effectiveness, and is an indication of how challenging it is to run a national literacy program in different regions and districts in the country. Obviously, this program is not fully contextualized to address local community literacy needs. As a result, development organizations have incorporated their own agendas within the existing FAL Program; this is happening in the eastern region but not in the central region. This approach is one way of addressing the negative attributes of the FAL Program and thereby adding value to the local literacy classes.

The challenges to effective program implementation limit the extent to which the program can be a worthwhile and feasible national opportunity for adult literacy learning in Uganda. The promotion of this literacy program should not be about "throughput" numbers, where attention is focused more on the number of learners than the quality of learning outcomes and the long term impact of literacy on the adult learners, their families, and communities. It is not enough for the government to run a national literacy program if it is largely devoid of a social context and local community challenges, as this becomes an unproductive program similar to UNESCO's Experimental World Literacy Program of the years between 1967 and 1974.

5) How can adult illiteracy be addressed in the local communities?

A majority of respondents recommended the sharing of learner stories with all community members as the first approach to addressing illiteracy. Conducting mobilization exercises and holding village meetings were also mentioned as other approaches that could be used to get more individuals involved in the current literacy program in the community. The local context through which literacy is promoted is essential to developing a productive literacy-learning activity that draws on the social experiences of the adult learners. Literacy is a means to social inclusion and this is central to how learners choose to reflect on its role

in everyday life. Literacy, if well planned and organized, has the potential to lead to social, political, economic, and environmental transformation, as the implementation of the REFLECT approach by Action Aid has revealed. So how can the different concepts of literacy be drawn together to influence the revision of future implementation of the FAL Program in Uganda? The answer lies in redesigning adult literacy learning under the FAL Program as social practice.

Redesigning FAL Learning as Social Practice

The length of time that the FAL Program has been operational gives literacy implementers the opportunity to review and reconstruct some aspects of the FAL Program, especially to update the curriculum content to reflect the present situation in the country and take account of global trends. The implementation of the program should go beyond labeling people “literate” or “illiterate”. Through redesigning literacy learning as social practice, local communities will have an important part to play in shaping the types of literacy that are meaningful to them. Of paramount importance is the involvement of local communities in forming FAL committees, committed to raising awareness (for example, through community meetings and at religious services) of the contribution of literacy learning to communal growth and development. The MGLSD has a vital role that includes strengthening the collaboration between local communities and other literacy providers.

Critical social theorists have developed their own understanding of literacy as more than functional. Adult literacy learning should be about the interests and needs of the learners. Therefore, literacy learning, when placed within the sociocultural, economic, and political contexts of the lives of adult learners, should allow them to draw on local resources to develop and sustain their literacy interests. The MGLSD should look into a grassroots approach to literacy learning, as a way of beginning to review aspects of the FAL Program that have discouraged adult literacy learners from implementing the acquired knowledge, and also for new learners to join the FAL Program. An adult literacy program designed within a social community-based context has a chance of addressing inequality, inaccessibility, and illiteracy among the population. In the long run, adult learners should be able to develop a voice that projects their concerns and is a sign of personal freedom, as professed by the REFLECT approach.

Implications for Research

This paper has explored the functional and sociocultural approaches to adult literacy learning in the context of Uganda. Functional literacy is just one approach to offering literacy learning in Uganda. However, there is a need to recognize that individual learners exist within diverse social contexts that are central to understanding literacy and educational learning. A number of research studies on Uganda have focused on the implementation of the FAL Program and the areas that need to be improved for the program to be successful in the various districts in the country. More studies are needed to question the functional approach to adult literacy learning in Uganda, as an answer to the rising levels of illiteracy. These studies should challenge the MGLSD to explore social and sociocultural ways of implementing adult literacy programs. UNESCO’s functional approach to literacy has been in existence globally since 1945, but still global illiteracy persists. The

Education for All initiative requires new and diverse ways of promoting literacy, especially among adults, in order to realize every individual's basic right to literacy.

Adult literacy is a significant global issue that requires more attention. Therefore, the nature of literacy programs and their implementation in developing countries like Uganda should be contextualized. This paper suggests that policy makers and implementers in Uganda need to revise the existing literacy programs and policies so as to make them more responsive to local people's struggles for survival, sustained livelihoods, and better community life. Furthermore, a strong sociopolitical backing for literacy programs is needed in order to allow local people to become engaged in shaping the kind of literacy learning interventions most relevant for their local communities.

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Historical foundation of diversity courses in teacher education programs and challenges of pedagogic application

Michael Takafor Ndemanu

Abstract

This article examines the historical underpinnings of multicultural education with respect to its origin, goals, and struggles for implementation in public schools prior to the 1970s. It also discusses the impeding factors that have up to now hampered an effective multicultural education preparation for preservice teachers, who are expected to acquire instructional strategies grounded in the core values of multicultural education in order to be effective teachers of diverse student populations. The setbacks, otherwise known as areas of concerns in multicultural teacher education courses, are explored in this article and classified as unpreparedness of middle-class white preservice teachers, scope of the curriculum and pedagogy, preservice teachers' deficit beliefs, preservice teachers' resistance to diversity and equity courses, racial identities of the instructors of diversity courses, and direct experiences. The examination of the setbacks are meant to raise awareness of the intricacies of teaching diversity and equity courses for teacher educators, and not to discount the contribution of such courses in inculcating cross-cultural awareness and praxis in prospective teachers.

Introduction

The purpose of diversity and equity courses is predicated on the premise that even though the US student population is becoming increasingly diverse, the teaching force remains predominantly monolingual, white, female, and middle-class (Milner, 2005). Thus, diversity and equity courses in teacher education programs were designed in the 1970s, in order to raise the preservice teachers' (PSTs) awareness of and sensitivity to the ever-growing diversity of student populations in US classrooms following the Brown vs. Board of Education landmark case. This culminated in a court ruling for racial integration of public schools in 1954 (Rountree, 2004). These courses were also designed to counteract PST beliefs that are antithetical to social justice, by infusing diversity and equity issues into the course and inculcating critical consciousness into the PSTs' thought processes so as to facilitate the unlearning of racialized (Cochran-Smith, 2000), homophobic, and gender-biased curricula (Banks & Banks, 1993). In order to understand the rationale of introducing multicultural education courses into teacher education, we must first look at the current US demographic with respect to education. According to the US Census Bureau (2000), culturally, linguistically and economically different (CLED) students will represent about half of the US school-aged population by 2020. In addition, the US remains the most religiously diverse country in the world (Eck, 2001). While the CLED student population is

increasing, the population of CLED teachers is dwindling (Nieto, 2000). An average eighth grader of color tends to compete only with an average white fourth grader (National Center for Educational Statistics, 2003). It is due to such a cultural and statistical disequilibrium between CLED students and the middle-class, white, female teachers that diversity and equity (DE) courses were introduced in many teacher education programs in the mid-1970s in order to raise the cultural competency and sensitivity of the latter for the rapidly growing CLED school-aged population in urban areas. Understanding the historical context that led to the creation of DE courses so as to equip the PSTs with the necessary cross-cultural pedagogic tools in order to function effectively in diverse classrooms is vital in gauging the effectiveness of such courses. In the subsequent sections, the historical background of the creation of DE courses in teacher education, as well as areas of concern in multicultural teacher education, will be examined.

Government Legislation and the History of Multicultural Education

Multicultural education had existed in many forms for decades before the passage of the Civil Rights Act of 1964, which led to the legitimization of the field. Although several attempts to institute multiculturalism in public schools had occurred before this passage, its implementation was only made possible when the federal government began enacting policies that validated multicultural education's core principles. These include the Civil Rights Act and the passage of Title IX of the Elementary and Secondary Education Act of 1965 (ESEA) from which the Ethnic Heritage Studies Program Act of 1972 emerged (Baker, 1979). The latter contributed to the creation of ethnic studies programs in many universities, which led to the development and expansion of scholarship on different ethnic groups and their cultures. The Bilingual Education Act of 1968, which was enacted in order to address language barrier issues, also fertilized the ground for broad multiculturalism, which could no longer be limited to only ethnic studies. These acts not only prohibited discrimination on the basis of race, ethnicity, language, physical and mental ability, and gender, but also allocated funding for their respective implementations. For example, the Bilingual Education Act funded bilingual educational programs.

The passage of the Equal Educational Opportunity Act of 1974, which sought to overcome barriers to equal educational opportunities, ended the perennial problem of the segregation of public schools on the basis of race across the country, while unintentionally creating another problem: that of the cultural incongruity between white teachers and students of color. The emergence of problems associated with cultural mismatch and achievement gaps, which have preoccupied educational researchers for the past four decades, will continue as long as residential segregation persists.

In 1975, the US Congress passed the Education for All Handicapped Children Act, which required any public schools receiving federal funds to provide equal access to education for all children with disabilities. The passage of this legislation led to the inclusion of disabilities as a theme in multicultural education. The enactment of the foregoing legislations at different times explains the minimally integrated nature of the content of multicultural teacher education curriculum since its inception. Although a number of founding scholars of multicultural education (see Sleeter & Grant, 2003; Banks & Banks, 1999; Nieto, 1998; Gollnick & Chinn, 1998; Gay, 1975) thought of it in terms of

interlocking systems of oppressions that should incorporate complete multiple perspectives from different groups rather than fragmented concepts, the reality was something else, given their diverse individual scholarly strengths in ethnic studies, gender studies, special education, and race and ethnicity.

However, a great deal of credit for the success of multicultural education and multicultural teacher education should go to the states and their boards of education, which took further measures to translate into reality the federal legislation geared toward leveling the playing field for all children. A case in point is the Ann Arbor (Michigan) Public School System, which, in conjunction with the Ann Arbor Education Association, designed a new teacher certification policy that stated:

Beginning in the 1972-1973 school year, no student teacher shall be accepted by the Ann Arbor Schools unless he can demonstrate attitudes necessary to support and create the multiethnic curriculum. Each such student teacher must provide a document or transcript which reflects training in or evidence of substantive understanding of the multiethnic or minority experience. (Baker, 1977, p. 164)

It was in response to similar policies around the country that many teacher education programs began hiring social justice teacher educators to design and teach mandatory multicultural education courses.

The National Council for the Accreditation of Teacher Education (NCATE) played a less significant role in the multiculturalization of teacher education programs, in spite of the influential position it has occupied in the realm of teacher education for decades. However, its contribution cannot be completely dismissed because, prior to January 1, 1979, adherence to the pedagogic principles of multicultural education was not part of NCATE's general standards. After this date, these standards were revised and expanded to include such requirements (Baker, 1979). These NCATE standards, in general, have contributed tremendously to the professionalization of teaching, and have translated into more accountability in terms of teacher quality (Murrell, 2001). Some of the key elements of the NCATE standards, which student teachers are required to fulfill in order to teach in the US, include a commitment to "apply effective methods of teaching students who are at different developmental stages, have different learning styles, and come from diverse backgrounds," and the ability to "understand the impact of discrimination based on race, class, gender, disability/exceptionality, sexual orientation, and language on students and their learning" (NCATE, 2008, p. 7). Teacher education programs seeking NCATE accreditation for the first time and those that wish to remain accredited strive to meet all of NCATE's standards, thereby paving the way for the continuous existence of multicultural teacher education. Even though it would be unfair to give NCATE an outstanding grade when teachers who have graduated from some of its accredited schools are still ill-prepared to teach in ethnically and linguistically diverse urban schools (Murrell, 2001), rejecting the professionalization of teachers and discrediting the work of NCATE and teacher colleges in some states undermines the great strides attained so far in teacher education reforms (Cochran-Smith, 2003).

In order to fully understand the meaning of multicultural education, we need to start by defining the term *culture* as understood by multicultural education scholars when applied to an educational setting. Culture in multicultural education is defined as “a social group’s design for surviving in and adapting to its environment” (Banks & Banks, 1999, p. 29). This definition does not limit itself to the heritage and traditions of a social group and can include sexism, sexual orientation, ageism and whatever factors a social group deems worthy of consideration. Banks (1993) defined multicultural education as “a reform movement that is trying to change the schools and other educational institutions so that students from all social-classes, genders, and racial and cultural groups, including all children with disabilities, will have an equal opportunity to learn” (p. 4). It is worth noting that the main goal of multicultural education was initially focused on fighting specifically for equality of educational opportunities for African-American children. As stated earlier, multicultural education broadened in the mid-1970s to include other minority ethnic groups, classes, genders, sexual orientations, and disabilities. This history is indicative of trends and issues rather than an exhaustive account, given the broad nature of the field and the large number of scholars theorizing about different ethnic and social groups.

Origin and Original Goals of Multicultural Education

In order to have a better understanding of the history of multicultural education in teacher education, it is important to trace the origins and original goals of the reform movement. According to Banks (1993) and Boyle-Baise (1999), multicultural education originated during the Civil Rights Movement of the 1960s, which had its roots in early black historians, such as Carter G. Woodson and W. E. B. DuBois. This was the period in which African-Americans’ struggle against inequities in social services culminated in the passage of a law that guaranteed them the right to vote, concomitant to the birth of multicultural education. Banks’s delineation of the origin of multicultural education focuses predominantly on African-Americans. Other social, gender and ethnic groups joined the movement at a later stage.

Payne and Welsh (2000) posit that the origin of multicultural education can be traced as far back as the 1840s when Catholics and German-Americans requested a more inclusive education (see also Glazer, 1995). These authors identified, for example, a struggle in the 1880s for the rights of the children of German immigrants to receive instruction in German. This effort culminated in the adoption of a German language option in several cities across the US, including St. Louis, Cincinnati, and Indianapolis, contrary to the wishes of assimilationists, who thought that immigrants should learn the English language and American culture instead of advocating their own. By the mid-1880s, there were about 300 German-English schools, mostly located in the rural Midwestern part of the US (Ramsey, 2010).

According to Montalto (1982), Rachel Davis DuBois, who was the first executive of the Service Bureau for Intercultural Education in the US, was the initiator of multicultural education. At that time, it was called intercultural education and focused more on equity, peace and racial tolerance, and less on ethnic studies. Her struggle for equal education for both African-Americans and whites in the 1920s and 1930s attracted considerable criticism. Her mission was to help people see their shared humanity and understand the

contributions of all cultural groups with regard to harmony and world peace (Montalto, 1982). Although DuBois played an influential role in the struggle for educational equality in the 1920s and 1930s, her foundational contributions in multicultural education research have remained largely unrecognized.

The indisputable precursor to a more popular version of multicultural education was the social action led by African-Americans and followed by white liberals and other people of color who marched during the Civil Rights Movement against 1960s racial segregation in the US (Banks & Banks, 1999; Davidman & Davidman, 1997). These individuals called for equal educational opportunities, curricular adjustments and hiring practices that encouraged diversity in the teaching force. As Ladson-Billings (1995) posited, a predominantly African-American school with a predominantly white academic staff and a predominantly African-American janitorial staff did not inspire the African-American students to be ambitious in school and, as a result, their grades suffered. This underrepresentation of ethnic minorities in white collar jobs explains why multiculturalists advocated diversity in school hiring practices. Note that in the early 1970s, the field was known as multiethnic education. It was thanks to the federal government's legislation of the 1970s that other groups (the handicapped, women, language minorities) who were affected by these laws began advocating for the inclusion of their respective group memberships. This, in turn, led scholars of the field to switch to the current nomenclature, multicultural education, in a bid to be more ecumenical.

In the 1970s, women's rights activists joined the struggle for educational, employment, and income equity. They insisted on school curricula that integrated women's history and experiences, and demanded an end to discriminatory hiring practices that limited women's opportunities to administrative posts. By the mid-1970s, other oppressed groups, such as gays, lesbians, the elderly, and people with disabilities, began insisting on equal civil and human rights (Banks & Banks, 1999).

Implementation of Multicultural Education

Beginning in the 1960s, a metaphorical shift emerged in regard to immigrants' acculturation processes. The US was no longer known as a "melting pot," but was, instead, known as a "salad bowl," a change freeing all groups to assert their rights to maintain their cultural identities and demand their own share of equal educational opportunities (Gezi, 1981). This change caused more multicultural programs to be created and various states to enact legislations to guide the implementation of multicultural education in both teacher education programs and K-12 schools (Giles, 1978). In the mid-1970s, a survey of 395 teacher education establishments showed that most were operating multicultural-related programs (Gollnick, 1980). However, a misunderstanding still existed among educators as to how to proceed with the implementation of a multicultural curriculum. Should children with minority backgrounds be offered remedial education in order to improve their achievement levels to those of mainstream students (Gezi et al., 1981)? Other researchers like Ramirez & Castaneda (1974) had previously considered the question to be inappropriate, as it meant accepting that minority cultures were not only different, but also deficient. They proposed a school situation in which every group maintained its cultural identity, but contributed to the rich diversity of American society. The underpinnings of

this debate shaped the conceptualization of instruction in multicultural teacher education. This paradigm navigation between the “salad bowl” and “melting pot” metaphors still has a tremendous pedagogic influence on instructors of multicultural education courses today in regard to how they teach courses.

According to McLaren (1994), Jenks et al. (2001), and Gorski (2009), the framework for multicultural teacher pedagogy falls under the following categories: conservative multiculturalism, liberal multiculturalism, and critical multiculturalism. Conservative multicultural instructors tend to design their instruction with the goal of achieving cultural homogeneity at the expense of cultural heterogeneity within a macroculture (Jenks et al., 2001). Liberal multiculturalism, the most popular pedagogic method in multicultural teacher education, is predicated on the values of human diversity and the need for sensitivity on the part of the prospective teachers with regard to a variety of issues pertaining to human diversity when dealing with CLED students. However, it fails to instill the critical postmodernist epistemology necessary for the PSTs to challenge the power relations and injustices within society. It is at this stage that critical multiculturalism is considered indispensable, because it imparts critical consciousness to the PSTs so that they can learn to detect injustices as well as work for social justice in a proactive manner.

The Struggles of Multicultural Teacher Education

For over four decades, DE courses have gained ground nationally in teacher education programs. The issues that some researchers have identified as impediments to multicultural education goals in teacher education programs are classified as follows in terms of areas of concerns: unpreparedness of middle-class, white PSTs; scope of the curriculum and pedagogy; PSTs’ deficit beliefs; PSTs’ resistance to DE courses; racial identities of the instructors of diversity courses; and direct experiences.

Unpreparedness of Middle-Class, White, Female PSTs to Teach CLED Students

In 1969, a task force report from the National Institute for Advanced Study in Teaching Disadvantaged Youth, *Teachers for the Real World*, stated that a failure exists in regard to teacher education programs successfully educating PSTs to become multiculturally competent. In this report, cited by Zeichner (1996), three problems that affect teachers’ abilities to teach CLED students were raised:

Teachers were unfamiliar with the backgrounds of poor students and the communities where they live, teacher education programs have ordinarily done little to sensitize teachers about their own prejudices and values, and teachers lack preparation in the skills needed to perform effectively in the classroom. (p. 526)

This 1969 report further suggested that PSTs were prepared to teach suburban, middle-class students, but not CLED students. In calling for a total overhaul of teacher education programs to reflect the changing demographic in the public school population, Smith (1969) stated:

Racial, class and ethnic bias can be found in every aspect of current teacher education programs. The selection process militates against the poor and minorities.

The program content reflects current prejudices; the methods of instruction coincide with the learning styles of the dominant group. Subtle inequalities are reinforced in the institutions of higher learning. Unless there is scrupulous self-appraisal, unless every aspect of teacher training is carefully reviewed, the changes initiated in teacher preparation as a result of the current crisis will be, like so many changes which have gone before, merely differences which make no difference (pp. 2-3).

Surprisingly, four decades after the publication of the above report, the same complaints about teacher education remain commonplace. In 1987, NCATE found that out of the 59 teacher education schools that requested accreditation, only eight met the minimum requirements for multicultural education standards (Zeichner, 1996). A few years later, Ladson-Billings (1990) reported that many teachers graduating from teacher education programs were refusing to teach in urban settings where culturally and linguistically different students abounded, due to their ill-preparedness and unwavering stereotypical beliefs:

Schools and colleges of teacher education are turning out class after class of young, white female teachers who would rather work in white, middle-class suburbs. Unfortunately, their services are most needed in low-income schools, whose students come from races, cultures and language groups for whom these new teachers feel unprepared. (p. 25)

The unwillingness of PSTs to teach in urban schools even after taking a multicultural education course, like DE, is a huge concern for teacher educators in general and multicultural teacher educators in particular.

Preservice Teachers' Beliefs and Predispositions

Richardson (1996) postulated that beliefs correlate with constructivist theories, and stated that PSTs start education programs with beliefs that strongly influence their perception of multicultural education course content. Their educational backgrounds and sociocultural experiences have a huge impact on their beliefs; therefore, it is critical to understand that beliefs should not be viewed only as something inappropriate, as there are as many positive beliefs as there are negative ones, depending on one's social location and cultural values. Hence, what might be considered a negative belief by one could be a positive belief for another. One of the goals of a multicultural education course is to influence beliefs and attitudes vis-à-vis minority students with respect to their learning abilities. As Green (1971) stated, teaching has to do, in part at least, with the formation of beliefs, and that means that it has to do not simply with what we shall believe, but with how we shall believe. Teaching is an activity that has to do, among other things, with the modification and formation of belief systems (p. 48).

One might wonder to what extent these beliefs are being modified and/or formed in DE courses. If any positive beliefs are being formed, there is still no general consensus as to whether the shift is thanks to DE courses or college courses as a whole.

Personal school experiences influence PSTs' beliefs and attitudes about cultural inclusiveness. They do not come into the program *tabulae rasae*, but instead, come in with their own stereotypes about other people's children (Delpit, 2006) that emanate from their early socialization. Worthy of note is the fact that some PSTs have had more "real-life experiences with cultural diversity than others" (Boyle-Baise, 1996, p. 14). There is no gainsaying that PSTs' past experiences in grade school impact the way in which they perceive teaching in general:

Personal experience includes aspects of life that go into the formation of world view; intellectual and virtuous dispositions; beliefs about self in relation to others; understanding of the relationship of schooling to society; and other forms of personal, familial, and cultural understanding. Ethnic and socioeconomic background, gender, geographic location, religious upbringing, and life decisions may all affect an individual's belief that, in turn, affect learning to teach and teaching. (Richardson, 1996, p. 105)

What is factual about Richardson's analysis is that our socialization plays a huge role in forming and reforming our beliefs. Some of the beliefs that prospective teachers bring into the teacher education programs are perennial. Modifying them requires a robust multicultural curriculum that takes into consideration the sources of their information and knowledge construction concurrently with the cultural differences that exist between them and their potential CLED students. Teaching strategies that involve reawakening the prospective teachers' critical consciousness are necessary so that they can challenge some of their beliefs about diverse student populations. The PSTs' beliefs about instruction as well as their experiences as students also impact the way in which they learn and teach. This attitude is similar to the adage that teachers tend to teach the way they were taught instead of the way they were trained to teach. In addition, many PSTs whose role models are their former teachers tend to embrace the teaching philosophies of the latter (Crow, 1988). On studying beliefs held by PSTs on special education, Brantlinger (1996) concluded:

These university students had images and ideas of how to teach, what school is for, good and bad parents, and the characteristics of individuals from their own and other social classes. They had personal theories about how people learn and the purpose of education. They readily applied these common sense notions to their experiences in the teacher preparation program. (p. 29)

The personal theories that PSTs hold about education and "other people" ultimately affect the way that they experience the content of multicultural education courses.

PSTs' Resistance to Multicultural Education Courses

Many PSTs believe that not every student can learn (Guerra & Nelson, 2009). This deficit thinking about CLED students, in turn, influences how PSTs teach CLED students when they become teachers (Zeichner & Hoeft, 1996). Conversely, high expectations for CLED students breed higher academic achievement. Hilliard (1974) argued that the poor academic achievements of CLED students are a result of teachers' low expectations for their

students. The major source of these low expectations is the teachers' negative beliefs about what CLED students can and cannot do. In order to alter this deficit thinking, teacher educators should refocus the attention of PSTs towards articles and/or readings that carry cases of success in teaching CLED students (Zeichner & Hoeft, 1996). Most people who stigmatize others do so as a result of ignorance. Many PSTs do not know the history of CLED students and this absence of historical knowledge leads to unreflective assumptions and negative stereotypes of the latter's academic abilities. Ellwood (1990) argued for the inclusion of ethnic studies in teacher preparatory programs so that prospective teachers would have more time to learn about the history of disadvantaged ethnic groups. However, he failed to include other minorities, such as the disabled, women, and students from low socioeconomic backgrounds. PSTs may never be fully prepared to teach CLED students if ethnic studies are not a part of the curriculum in teacher education programs.

Talking about the impact of African-American history in the US, Malcolm X stated:

If we don't go into the past and find out how we got this way, we will think that we were always this way. And if you think that you were in the condition that you're in right now, it's impossible for you to have too much confidence in yourself, you become worthless, almost nothing. (Tosh & Lang, 2006, p. 5)

While it is important to learn about the history of CLED students in order to have a better understanding of who they are, a danger exists in such knowledge causing accusations and counteraccusations on the part of the PSTs. It is very common to hear white PSTs say, "My great-grandparents never owned slaves." This defensive mechanism is often used when structural inequalities in society are being examined.

According to Finney and Orr (1995), while PSTs learn about cultural inclusion in their multicultural education courses, the courses often fail to negate the PSTs' beliefs about privileges that only some ethnic groups enjoy. Weisman and Garza (2002) conducted an evaluation of PSTs' beliefs about diversity at a university in California and arrived at the following conclusion:

Although by the end of the multicultural course there was an overall positive orientation to diversity, the low levels of agreement for certain key items on both the pre- and post-surveys are cause for concern. The majority of these preservice teachers began the semester with a perspective that was oriented toward blaming minority students and their families for a lack of educational success rather than looking at factors within the structure of schooling or society as possible sources of educational difficulties. (p. 32)

In the same vein, Haberman & Post (1992) postulated that if any positive changes have occurred in the PSTs' beliefs, they have been marginal; while Kagan (1992) stated that "candidates tend to use the information provided in the coursework to confirm rather than to confront and correct their preexisting beliefs" (p. 154). This debate leads to the issue of predispositional factors that some researchers have documented as contributing to changing perceptions. Smith, Moallem and Sherrill (1997) found that four factors (education, travel, experience with discrimination, and exposure to different cultures)

contributed to a positive change in prospective teachers' beliefs about teaching CLED students.

The above arguments bring us to the following question: Are PSTs from diverse campuses more predisposed to embrace diversity in all its forms than those from homogenous campuses? In attempting a response to this question, Garmon (2004) carried out a case study on a prospective teacher who had taken his course on multicultural education. He summed the results of his findings into six major factors that influenced his student's change of attitude. The six factors were categorized as followed: openness, self-awareness, commitment to social justice, intercultural experiences, support group experiences, and educational experiences. In addition, he called for intercultural experiences as a prerequisite for admission into the teacher education program, since these experiences are instrumental in opening people's minds to multicultural education literature.

Although Leslie [Garmon's student] began her teacher education program with favorable dispositions for learning about diversity, it was her intercultural experiences that actually stimulated her multicultural growth by pushing her out of her comfort zone and challenging her to re-examine her racial attitudes and beliefs. (p. 212)

The results of this study throw additional light on the PSTs' resistance to human diversity issues and how this resistance could be limited or deterred in teacher education programs.

Ross and Smith (1992) noticed incremental gains in students' knowledge and attitudes with respect to the socioeconomic and political factors that contributed to the academic underachievement of nontraditional students when the PSTs in the study took a semester-long multicultural education course. Despite this, Pohan (1996) posited that preservice teachers who come into teacher education programs with higher levels of entrenched biases about diversity were less likely to internalize any instructional content that might influence their beliefs and attitudes. According to Brown (2004), this resistance is manifested in the following ways: unwillingness to participate in class discussions, lack of passionate engagement in post-reading discussions, and low rating of the courses and instructors.

As Taylor and Sobel (2001) suggested, the solution to training PSTs how to teach CLED students should not be limited to methodologies and approaches, "but rather in understanding how teachers' beliefs, attitudes and dispositions are interwoven with their knowledge, skills and behaviors of classroom teaching" (p. 489). It is therefore critical for teacher educators to take into consideration the results of the different research findings so far obtained on PSTs' beliefs and attitudes toward diversity as they design their syllabi and plan instructions. Given that "we are what we know. We are, however, also what we do not know" (Cochran-Smith, 2000, p. 169), it is of paramount importance for multicultural education courses to be oriented toward elevating the PSTs' critical consciousness about individual beliefs vis-à-vis CLED students, for it is only when a problem is identified that a solution can be sought.

A Teacher Educator's Race and Ethnicity

Another concern of paramount importance in multicultural teacher education is the symmetric demographics of the PSTs and their instructors (Gay, 1997; Lowenstein, 2009). Eighty percent of education faculty members are white and 63% have grown up in suburbia, which is “segregated” from people of color. Less than 1/3 has travelled outside of the US (MacDonald, Colville-Hall, & Smolen, 2003). This limited exposure to people of color affects the way that PSTs view racially different faculty members as their instructors, especially in terms of whether the instructor can relate to their experiences. This limited exposure also explains why white PSTs taking DE courses tend to lump the “message” (the course content) and the “messenger” (the instructor) together, especially when the concept of racial discrimination is being taught by an instructor who is a member of a historically oppressed racial or ethnic group (Dixson & Dingus, 2007).

Many studies have shown that a number of white PSTs are prejudiced toward CLED students and tend to have low academic expectations for them (Irvine, 1991; Delpit, 1995; Darling-Hammond et al., 2005; Guerra & Nelson, 2009). In order to counter this deficit thinking, Justiz and Kameen (1988) and Haberman (1989) called for the recruitment of qualified PSTs of color, given that they tend to harbor predispositional factors which contradict CLED students' negative expectations of their white teachers.

While some multicultural education researchers believe that the best teachers of CLED students are teachers of color, since they can easily relate to the students' experiences (Haberman, 1991), white PSTs also believe that American-born people of color, especially African-Americans, should not be instructors of multicultural education courses because they have an undisclosed agenda resulting from the country's history of slavery and racial discrimination:

My group talked about our concern with having an ethnic professor teach a course on equity and diversity. We are concerned that they will have an agenda. It might be better to have another professor teach the course so that students get a broader perspective. (Dixson & Dingus, 2007, p. 639)

As stated earlier, white PSTs seem not to be only resistant to the “message,” but also the “messenger,” depending on the latter's racial and ethnic background. Talking about the incongruity of PSTs' perspectives and experiences with those of their instructors of another race, one PST in Cochran-Smith's (2000) study said, “Marilyn, I think that you are very brave and genuine to ask the tough questions that you ask your white students. But the truth is, your perspective, your reality, does not necessarily reflect ours” (p. 173). This criticism and a host of others from PSTs of color gave her the opportunity to approach the multicultural course from a more critical angle in order to “unlearn” racism as a text embedded in teacher education.

According to Housee (2008), the lecturer's racialized identity is a huge factor for PSTs in determining the receivability of the course content. While African-American instructors may be prejudged by white PSTs for their “loyalties and sensibilities” to African-Americans, doubts are cast by African-American PSTs on white lecturers' abilities to empathize with victims of racism and understand racial issues. In Dixson and Dingus's

(2007) study, white PSTs treated one African-American author with suspicion, just as some African-American students viewed their white instructors as being insensitive to and insensible with regards to teaching race-related courses (Housee, 2008):

Some [black] students felt that the white lecturers were their enemies. My presence tremendously challenged them. I would enter the classroom for a battle and often won. Sometimes black students don't like the idea of a white lecturer teaching about "race" and racism. It was challenging. I have to draw from my own background—an anti-Semitic experience—to legitimize my teaching. (p. 424)

In the foregoing quote, the instructor has to identify an element of historical oppression from his own background in order for his students to relate to him. In a similar vein, female instructors often have to draw on the history of oppression of women to boost their credentials to handle any course that covers racism and other "isms."

Similar criticisms have been made by seasoned multicultural education experts about white instructors with limited cross-cultural experiences teaching diversity and equity issues to white PSTs (Gay, 1997; Ladson-Billing, 1995). Zeichner (1996) posited that "most of the education faculty who must be counted on to improve the preparation of teachers for diversity are as lacking in interracial and intercultural experiences as their students" (p. 138). Howard (2006) asked, "Can they teach what they do not know? What is it that they have to know in order to comfortably teach CLED students or be accepted by the latter to teach them?" There seems to be an absence of that community teacher "who possesses contextualized knowledge of the culture, community and identity of the children and families he/she serves and draws on this knowledge to create the core teaching practices necessary for effectiveness in diverse setting" (Murrell, 2001, p. 52). In response to Murrell's call for community teachers, Boyle-Baise (2005) advocated multicultural service learning for PSTs with the goal of affirming diversity, critiquing inequality and building inclusive community with low SES and people of color, while paying special attention to their local needs and knowledge base. The absence of this cultural repertoire and community knowledge of teacher educators diminishes their abilities to make clear-cut connections between concepts and real-life situations. The absence of an educator's community knowledge has an adverse impact on PSTs just as the absence of the community knowledge of the latter diminishes their teaching output in predominantly CLED classrooms.

Conclusion

DE courses in teacher education programs are fraught with sensitive issues about human diversity. The issues covered in DE courses are considered sensitive in nature to many PSTs because their beliefs and ideologies about race, poverty, religion, Standard English, LGBT (Lesbian, Gay, Bisexual, and Transgendered), gender, and tracking are formally challenged by the readings and instructors of the course. Understanding the goals and history of multicultural education is just as important as understanding the inherent problems that plague the field, as elaborated in the section on the struggles of multicultural education.

Resistant theorists in the field of education have generally focused on CLED students who resist the formal education taught from the perspective of Anglo-American educators, and neglected the resistance manifested by white PSTs in courses that focus on social justice for the oppressed groups. Although some educational researchers have written about white PSTs' resistance to the main tenets of multiculturalism (Brown, 2004; Finney & Orr, 1995; Weisman & Garza, 2002; Haberman & Post, 1992; Kagan, 1992; Smith, Moallem, & Sherrill, 1997; Garmon, 2004; Zeichner & Hoeft, 1996), many have overlooked the transactional pedagogic dimension as propounded by Knight-Abowitz (2000) in which resistance becomes a teachable moment for PSTs to have a profound reflection on their deep-rooted assumptions about diversity. According to Knight-Abowitz, instructors should interpret resistance as a communicative style emanating from social and political standpoints from which a new level of inquiry could be elicited from the students. Thus, using transactional inquiry methodology to comprehend and respond to the PSTs' resistance on diversity-related issues is grounded on the premise that, "communication is the making of something in common in which two or more humans modify their individual experiences through joint activity" (p. 883).

However, white PSTs' resistances to some of the tenets of multicultural education associated with race and socioeconomic status should be expected. It should not be *ipso facto* construed as being racist because many of the class readings are stereotypical of Anglo-Americans. PSTs could be challenged to critically reflect on their assumptions about people of color without necessarily stereotyping and/or vilifying Anglo-Americans.

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The expression and conceptualization of motion through space and manner of motion in Arabic and English: A comparative analysis

Ghadah AlMurshidi

Abstract

This paper is a comparative analysis of English and Arabic expressions of motion events using narratives of Chafe's (1980) Pear Story elicited from native speakers of both languages. The native-speaker English narratives were elicited by Feiz (2007). A discourse analytic approach is used to examine how speakers of Arabic and English indicate motion through path, manner, and ground. The data consist of 45 elicited oral narratives. The narratives are all based on Chafe's (1990) Pear Film, which is a 6-minute film with many characters, but no dialogue. Fifteen of these are in Arabic, fifteen in English by Arabic speakers, and fifteen in English by native English speakers. The findings of this study indicate that Arabic is a verb-framed language (Talmy, 2007). It has a variety of path verbs such as yadheh "fall," yamer "pass," and yenzel "descend." Furthermore, the stative verb is used frequently in Arabic by all the Arabic speakers to describe a static location (Feiz, 2007). The total number of uses of the stative verb in Arabic is 71 tokens. In addition, the verb yati "come" is used in Arabic to introduce newcomers, as it is in English (Feiz, 2007). However, the use of the manner verbs in Arabic, such as etkhardhaf "tumbles," is rare. English is considered a typical satellite-framed language. It has a large number of manner verbs (Slobin, 2003). Some deictic verbs are used with path satellites (e.g., comes along). Manner verbs are also used with path satellites (e.g., climb down and walk back). Multiple path satellites also appear in English (e.g., came down off and climbed back up in).

Focus of the Study

The focus of this paper is the comparative analysis of English and Arabic expressions of motion events using narratives of Chafe's (1980) *Pear Story* that were elicited from native speakers of Arabic and English. The native-speaker English narratives were elicited by Feiz (2007). A discourse analytic approach is used to examine how speakers of Arabic and English indicate motion through path, manner, and ground. My work is inspired by Feiz (2007), who conducted a similar comparative and constructive study using American English and Persian and based on Chafe's (1980) *Pear Film*.

The "motion event" is the analytic unit in this study, based on Talmy's (1991, 2000) framework, which covers Figure, Path of motion, and Ground. It can also contain the Cause and Manner. Talmy (1985, 2000) classifies the world's languages into satellite and verb-framed languages. Japanese, French, and Arabic are considered verb-framed languages because they express the path in their verbs such as "exit the house skipping." In contrast, English, Chinese and Russian are felt to be

satellite-framed languages as a result of indicating path through particles, e.g. “skip out of the house” (Talmy, 1991; 2000)

Motion is the basis of the motion event. Talmy’s (1985) example of a bottle floating out of a cave in Spanish (a) and English (b) and how these languages encode path and manner are shown below.

(a) La botella salió flotando.
“The bottle exited floating.”

(b) The bottle floated out. (p. 487)

In Spanish, the verb, *salir* “exit” indicates the path, and the manner is presented by using the gerund *flotando* “floating.” In English, the satellite “out” encodes the path and the verb “float” expresses the manner. Spanish is considered a verb-framed language, whereas English represents a satellite-framed language. As a Semitic language, Arabic is considered a verb-framed language (Talmy, 2007). The purpose of this study is to understand the linguistic typology of the Arabic language based on Talmy’s (1991, 2000) framework.

Language and Conceptualization

Introduction

The fact that the world’s languages conceptualize space and time in different ways is related to the notion of linguistic relativity (Whorf, 1956; Bloom, 1981; Brown & Lenneberg, 1954; Levinson, 1994, 1996a, 1996b; Lucy, 1993, 1996; Slobin, 1996a, 1996b, 1998). Linguistic relativity is concerned with the effects of specific language on nonlinguistic cognition. Linguists and psychologists have related grammar to the world, culture, or speakers of the language (Slobin, 2003). Linguistic relativity researchers “should assess the cognitive performance of individual speakers aside from explicit verbal contexts and try to establish that any cognitive patterns that are detected also characterize everyday behavior outside of the assessment situation” (Lucy, 1996, p. 48). In this view, “cognition” is conceptualized as procedures that are carried out whether people are engaged in verbal behavior or not (Slobin, 2003). Another approach to conceptualizing cognition is based on language use and culture. Gumperz and Levinson (1996) emphasize the significance of “theories of use in context,” such as semantic and pragmatic theories.

Cognitive linguistics deals with the relationship between language, the mind, and sociophysical knowledge (Evans & Green, 2005). Cognitive linguists research the relationship between language and cognition (Lakoff, 1990). The cognitive grammar model maintains that language is neither self-contained nor describable without necessary relevance to cognitive processing (Langacker, 1986).

In this section, I will present Talmy’s framework of motion events and express their components, which are path, ground, manner, and cause. After that, I will present Slobin’s investigations, which are based on some linguistics studies on

motion that shed light on the “thinking for speaking” idea, which explains how language conceptualization is influenced by language patterns.

Talmy’s framework of motion events

Languages vary in expressing motion, as Talmy (2000) describes events of translocation, in which “an object’s basic location shifts from one point to another in space” (p. 35). Talmy (1985) defines the motion event as “a situation containing motion and continuation of stationary location alike” (p. 60): first, we have the figure that is the object or being to be located or traced in space and expressed in the subject NP of a spatial expression; second, there is the activating process which can be in fixed or transited setting and mostly refers to the verb. Because of the changeable nature of the setting, Berthele (2004) prefers to use the term “spatial localization event” rather than “motion event”. Third, the path or the association function, such as the preposition, relates the figure to its spatial environment. Finally, the ground is the endpoint of the moving entity. It might constitute the manner of the action, which can range from a general manner, e.g., *walk*, *run*, or *fly*, to a specific manner, such as *limp*, *sprint*, or *swoop* (Talmy, 2000: 25). An example of a motion event is presented in the sentence below (Slobin, 2005):

<i>John</i>	<i>ran</i>	<i>into</i>	<i>the room.</i>
FIGURE	MOTION+MANNER	PATH	GOAL
Figure	activating process	association function	ground

Languages are classified based on lexicalization systems for motion events which focus on path. In verb-framed languages, the path is indicated in the main verb (e.g., enter, exit, ascend, and descend). Romance, Semitic, Turkic, Basque, and Japanese are considered verb-framed languages. In *satellite-framed languages*, path is encoded by the verb particles or affixes, known as “satellites,” that are associated with the main verb, such as in, out, up and down. Germanic, Slavic, and Finno-Ugric are considered satellite-framed languages (Talmy, 1985, 1991, 2000).

Gentner (1981, 1982; Gentner & Boroditsky, 2001; Gentner & Goldin-Meadow, 2003a, 2003b) recommend analyzing verbs and prepositions, which may show spatial relations more clearly than nouns do. Therefore, the analysis in this study mostly focuses on verbs. This section presents an analysis of the expressions of space that encode path, ground, and manner of motion in the discourse narratives of Arabic and English speakers based on the *Pear* film. The purpose of the section is to elucidate the status of Arabic with respect to Talmy’s typology of languages as S- or V-framed.

The relationship between linguistics and the conceptualization of space has been studied by linguists (e.g., Haviland & Levinson, 1994; Jackendoff, 1983; Pütz & Dirven, 1997; Senft, 1997; Svorou, 1994; Talmy, 1983). In the field of spatial cognition, Landau and Jackendoff (1993), Hayward and Tarr (1995), and others have proposed that visual representations of space may constrain spatial language. Some expressions used to describe spatial relations (e.g., over, above, on, within) indicate shape (Landau & Jackendoff, 1993).

Motion Events and Discourse Analysis

Slobin (1987) and Berman and Slobin (1994) have applied Talmy's typological framework to different written and oral elicited narratives of various languages, which emphasizes the effect of linguistic typology on the motion events (Slobin 1987, Berman and Slobin 1994, Slobin 1996a, b, 1997, 2000, among others).

Path and Ground

As noted, Talmy (2000) divided the world languages into two categories based on the path of motion: V-languages and S-languages. Turkish is a typical V-language that encodes the path in its main verb; however, English, considered a typical S-language, encodes the path using a satellite connected to the verb (e.g., *come down*, *come back*).

Slobin (various) and Berman and Slobin (1994) noticed that speakers of various languages tend to use the morphosyntax of their language in recounting the narratives, and rarely use structures different from their language norm (Slobin, 1987: 439). S-languages might use different path satellites with a path verb in a single clause; therefore, they conflate more than one ground component with a single verb. However, V-languages use a different verb to express each segment (Slobin, 1997, 2004). V-languages use fewer path segments, fewer ground components, and a large number of bare verbs (Slobin, 1996a: 200).

Path is the most important element in Talmy's (2000) framework. This is the trajectory or the figure location with respect to the ground. The path has three elements: the Vector, the Conformation, and the Deictic. The Vector indicates the direction of motion according to the ground (source, endpoint, or midpoint); therefore, it refers to the arrival, traversal, or departure of the figure with respect to the ground (p. 53). Similarly, Johnson (1987) expresses the idea of the Source-Path-Goal image schema that structures a finite path. It has three elements: source (starting point), path (the trajectory from the starting point to the endpoint), and goal (endpoint). The conformation expresses the geometric characteristics of the ground. For instance, if the ground is an enclosure, the path satellite "in" or the path verb "enter" will be used; however, the path verb "reach" will be used to encode the flat surface ground. The deictic element of the path comprises two components of directionality. First, the deictic verb "come" is used to encode movement toward the speaker. Second, the deictic verb "go" is used to encode movement in a direction other than toward the speaker.

Manner and Cause

Manner and cause are considered co-events of the motion event in Talmy's framework. Manner verbs in V-languages tend to be "telic" (Aske, 1989; Slobin, 2004). Therefore, V-languages use the equivalent of "the owl *exited* the hole *flying*" instead of using "the owl *flew out* of the hole," because its verbal construction cannot encode both manner and boundary-crossing at the same time (Slobin, 2000, p. 112).

S-languages use satellites to indicate the path, so the manner verb fills the slot of the main verb (e.g., walk, run, fly . . . in, out, into). This eases expression of the manner verbs (Slobin, 2000, 2004). S-languages have a large variety of manner verbs that are encoded habitually by their speakers (Slobin 2000, 2004).

In V-languages, the path is encoded in the main verb, so the manner verb does not have a slot in the main verb and is not easily codable. In this case, V-language speakers tend to add some structures to express manner; e.g., *exit by running or enter in haste* (Slobin, 2004).

Cause is the other co-event of the motion event in Talmy's framework. In the example below, the Figure is *the pencil*, and *the table* is the ground. The Path is described by the preposition *off*. The verb *blew* indicates the Cause that creates the motion itself (Talmy, 2000, p. 26)

The pencil blew off the table.

However, in Arabic, the prepositional phrase could be used to express the cause of the motion, as in the following example:

(1) Describing the bike boy falling down – speaker #17

fadhahat qubaatah ***men elhawaa***

“His hat blew off”

(Literally, “His hat fell from the air”)

Wa ho ma shaf elhasah elli jedamah ala el sharea

He did not see the rock that was in front of him on the road

Wa etkhardaf fiha

And tumbled over it

The object is *his hat*. Path is encoded using the path verb *dhah* “fell,” inferring the meaning “falling down,” which encodes Direction. The prepositional phrase *men el hawaa* “from the air” indicates Cause. The source and the ground are not mentioned because the focus here is on the cause of the motion.

Data and Methodology

Data

In this section, I will present the details concerning the data elicitation and collection, the methodology used for analysis, and the participants. The data for this study consist of Arabic and English narratives elicited from native speakers of Arabic. Moreover, I used the analysis of the data that was elicited by Feiz (2007), which contains native English speakers. These narratives are based on Chafe's *Pear Film*.

The data consist of 45 elicited oral narratives. The narratives are all based on Chafe's (1990) *Pear Film*, which is a 6-minute film with many characters, but no dialogue. Fifteen of these are in Arabic, fifteen in English by the Arabic speakers and fifteen in English by English speakers, as shown in Table 1.

Pear Film	
Arabic	15
English by Arabic speakers	15
English by English speakers (Feiz 2007)	15
Total	45

Table 1. Types of narratives and totals

In eliciting the data, I used a short film (Chafe's (1980) *Pear Film*) that had no dialogue, to give the participants the opportunity to tell the story using their own words, according to their interpretation and understanding of the story events. The emphasis of the analysis is on the variation between Arabic and English. This data elicitation method has been used by other linguists such as Bartlett (1932), Chafe et al. (1980), and Berman & Slobin (1994). Their studies focus on memory and retelling the stories.

Pear Film was produced in the late 1970s by Wallace Chafe in collaboration with some linguists who were at UC-Berkley. It is a six-minute film with no dialogue, and was created to examine "cognitive, cultural, and linguistic aspects of narrative production" (Chafe, 1980).

The following is a brief summary of *Pear*:

The story opens with a man picking pears in a pear orchard. He is up in a tree and then comes down his ladder to fill one of his baskets with the pears that he had picked and placed in his apron. After he unloads his apron, he goes back into the tree to pick more. Meanwhile, a boy comes by on his bicycle and steals an entire basketful of pears. As he rides off, with the basket of pears on the front of his bike, he sees a girl riding a bike toward him. He is distracted for a moment and his hat blows off. Then, as he continues to ride, there is a rock in the road that he doesn't see. The front tire of the bike hits the rock and the bike falls down, as does the boy and his entire basket of pears. Three other boys witness this and they come over to the boy to help him pick up the pears and put them back into the basket. In thanks for the three boys' help, the first boy gives them each a pear and he rides away on his bike. The three boys then pass the man who was picking the fruit, and as they pass, they are each eating a pear that was given to them by the boy. The film ends as the boys pass by the man who has a very quizzical look on his face. (Strauss, cited in Feiz, 2007)

The *Pear Film* narrative data were collected during two weeks in a study group room in the library of a large northeastern public university. The participants watched the film alone, and then recalled it in detail while the researcher audio- and videotaped them.

Participants

I collected thirty narratives, fifteen in Arabic from native speakers of Arabic and fifteen in English, from native speakers of Arabic who studied English as a foreign language. The fifteen native-English-speaker narratives were collected by Feiz (2007).

The selection of Arabic speakers was based on the following: 1) all are adult native speakers of Arabic; 2) all have resided in the US for a period of no longer than three years; and 3) all the Arabic speakers use Arabic in their daily life except in their university interactions. Most of the Arabic speakers were undergraduate students. Only one of them was a graduate student. Participants were divided nearly equally between genders: nine female and eleven male. The Arabic speakers were from four different Gulf countries: twelve from the United Arab Emirates, five from Saudi Arabia, two from Oman, and one from Qatar.

Data Analysis: Arabic as Verb Language and English as Satellite Language

In this section, I will present an overview of Talmy's typology, and provide some examples from *Pearl Film* of Arabic and English L2 data elicitation as an indication of their linguistic typology. Finally, I will provide an inventory of motion verbs in Arabic, English by native speakers (L1), and English by Arabic speakers (L2).

Talmy's typology

Motion event contains an entity (Figure) that moves through a Path in relation to another object that Talmy (1985) called Ground (p. 85). A motion event might also include an external co-event, which could be Manner and/or Cause. Based on the various lexical structures which languages use to form these elements into linguistics patterns, satellite-framed languages offer their speakers some locative particles to indicate the Path; these particles are called "satellites." Verb-framed languages, on the other hand, have plenty of verbs that are used to encode the change of location; that is, the Path is encoded in the verb.

As noted, English is considered a satellite-framed language. It has a large number of manner verbs such as roll, run, tumble, and scrawl, which can be combined with adverbs, particles or prepositional phrases that express Path information. Nevertheless, path verbs are limited in English. Greek is considered a typical verb-framed language, having path verbs such as *beno* "enter", and *pao* "go." These verbs are combined with prepositional phrases or adverbials, such as *sto spiti* "into the house," to indicate the path. Manner verbs, such as *sernome* "crawl," are limited in Greek (Aske, 1989; Talmy, 1985; 2000).

Satellite-Framed and Verb-Framed Languages

English, a typical S-framed language (Talmy, 2007), combines the fact of motion with the manner or cause; therefore, its lexicon is rich of manner-of-motion verbs, e.g., *stride*, *stroll*, *skip*, etc. An S-framed language indicates the Path through verb

particles or affixes attached to the verb as a satellite (Talmy, 2000), which is “the grammatical category of any constituent other than a noun phrase or prepositional phrase-complement that is in a sister relation to the verb root” (p. 102).

In V-languages, the Path is lexicalized within the verb of motion but the manner might be mentioned using adverbs; therefore, this type of language has many different path verbs, e.g., *exit*, *ascend*, etc. (Talmy, 2000). Spanish and Semitic languages such as Arabic represents V-framed language (Talmy, 2007).

Examples from *Pear Film*: Arabic and English L2 Data Elicitation

In this section, I provide examples from my data that illustrate Arabic as a verb-framed language. I also present examples from Feiz (2007) that illustrate English as a satellite-framed language.

Arabic as a Verb-Framed Language

Stative Verb

In describing the location of an object, three components are relevant: the object of interest, or Figure; a reference object, or Ground; and a locative component which points out the spatial relationship between the Figure and the Ground. Figure and Ground are described using noun phrases, and locative components are indicated through morphemes such as prepositions, postpositions, affixes, or predicates such as verbs (Kemmerer & Tranel, 2000). For instance, this is expressed in the phrase “the bird on the tree.” The NP *the bird* describes the Figure; the NP *the tree* describes the Ground; and the preposition *on* indicates the spatial relationship between the Figure and the Ground.

The stative verb is used frequently in Arabic to describe a static location (Feiz, 2007). The total number of uses of the stative verb in Arabic is 71 tokens, as shown in the table below:

Speakers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
<i>kan</i> “verb to be”	4	3	3	1	5	7	1	7	1	10	6	6	7	9	2	71

Table 2: Frequent use of stative verbs in Arabic

I explain below two excerpts that indicate the use of the stative verb in Arabic. In excerpt 2, the adverb *foq* “top” is used with the verb *kan* “to be” to describe the first scene of the pear story and express the location of the pear picker. In example 3, the adverb *ala* “top” is used to describe the location of the bike boy toward the bicycle.

(2) (Speaker 13) – static location

Bada enah wahed kan foq elshaiarah

The movie started that someone **was** in the top of the tree

Yenazel elthmar ehh elruman ala ma ateqed ehh la alkumathrah
He brings the fruit down ehh pomegranate as I think ehh no pears

(3) (Speaker 2) – static location

Kan ala elsakel wa harak
He **was** on the top of the bicycle and moved
wa nus adhareeq daam elwalad elli ala esikel
And in the half way, the boy on the bicycle hits
Daam ahh hasah ala elardh
hits rock that was on the ground

Path Verbs

In V-languages, the path is lexicalized within the verb of motion but the manner might be mentioned using adverbs; therefore, this type of language has many different path verbs, e.g., *exit, ascend*, etc. (Talmy, 2000). The Spanish language and Semitic languages such as Arabic represent V-framed languages (Talmy, 2007).

Some path verbs used in Arabic by native speakers are presented in the following paragraphs. These demonstrate Arabic to be a Verb-framed language.

Yadheh “Fall”

In excerpt 4, the path verb *yadheh* “fall” infers the semantics of “falling down,” which encodes the direction. The preposition *men* “from” is used to point to the source “the pear picker” while he was picking the pears. In excerpt 5 it is used to indicate the source “the bicycle”. The endpoint of the trajectories in those two scenes, which is the ground, could be inferred. *Yadheh* “fall” is the second most frequent path verb used intransitively in the Pear narratives by the Arabic speakers.

(4) Description of the pear picker’s actions - speaker #4

Wahed ayal kan yeyemea jawaf
A man was collecting pears
Wa ehh wa kan yeame
And ehh and while he was collecting
Dhahat menah jawafah wahedah
one pear **fell from** him

(5) Description of the bike boy falling - speaker #10

Famar end eeh dhefel thani
Then passed by ehh another child
Famen elhawa dhar elqubaah haqhetah fi elardh
Then his hat blew off from the air and fell on the ground

Kan yedhalea fi elqubaah
He was looking for the hat

Wa dhah men elsikel
And **fell from** the bicycle

Yamer "Pass"

The path verb *yammer* "pass" is a frequent verb in Arabic; there are 26 tokens of it in the pear stories. It is used intransitively and encodes the trajectory of the motion. Using this verb indicates the ground *dhefel thani* "another child." The semantics of the verb *pass* consist of "move + by" (Feiz, 2007).

(6) Description of the bike boy passing by the other boy – speaker #10

Wa masha baadha eldhefel elsareq
And the thief boy walked after that

Kan yerkab eldarajah haqetah
He was riding his bicycle

Famar end eeh dhefel thani
Then he **passed by** ehh another child

Famen elhawa dhar elqubaah haqhetah fi elardh
Then his hat blew off from the air on the ground

Yenzel "Descend"

The path verb *descend* encodes the path because it combines the verb *move* and the adverb *down*. The ground *tree* is inferred from the scene without explicitly mentioning it.

(7) Description of the pear picker's actions - speaker# 13

Wa hatha baadah yales yejamea kumathrah elli fuq
And he was picking up the pears

Yales yeame yeame
He was collecting the pears

baad ma enhafat elsalah menah
and the basket was stolen from him

Fal eyal mareen
Then the boys passed

Wa howa nazal tahat
And he **descended** down

We ela entabah enah fi salah mekhtafiah kamel
Then he noticed that a whole basket disappeared

Four speakers use the path verb *yenzel* “descend,” which combines the fact of motion and the trajectory *down*. They specify the source *tree* using the preposition *men* “from.” Example (8) illustrates this:

(8) Description of the pear picker’s actions with *Nazal men* – speaker #6

Wa bad entihaeh men qadhf alfakeha
And after he finished from picking the fruit
Nazal men alshajarah
He **descended from** the tree

Yaaber “Cross”

The path verb *abar* “cross” is used to describe the appearance on the scene for the first time of the man with the donkey (Feiz, 2007). This path verb is used intransitively, which encodes the path. The ground is the pear picker, which is inferred from the scene. The ground is used only by speaker #13, but it is used five times, as the example below shows:

(9) Description of the man with the donkey – speaker #13

Elqhsah kanat tetkalam an muzarea
The story was about a farmer
Kan yeqhdef el kumathrah men elshajarah
He was picking the pears from the tree
Mar
He passed
Kan yeqhdhef
He was picking the pears
Wa jamaa endah fi salat
And he was collecting them in baskets
Abar janbah rajal we endah hemar
A man crosses by him with a donkey

Yered “Return”

The verb *yered* “return” conflates the deictic verb *go* and the particle *back*. The ground, which is the tree, can be inferred from the scene.

(10) Describing the pear picker’s actions with *yered* “return” – speaker #2

Kan yehawel yeabi thalath salat kumathrah
He was trying to fill up three pear baskets
Ma aba ela ethnin
But he filled only two baskets

Frad foq asab Yeabi ethaltha
The he returned up to fill the third

English as a Satellite-Framed Language

Satellite-framed languages encode the trajectory through verb particles or affixes attached to the verb as a satellite, which is “the grammatical category of any constituent other than a noun phrase or prepositional phrase-complement that is in a sister relation to the verb root” (Talmy, 2000, p. 102).

In English, verb particles and prepositions appear after the verbs, so it is important to know how to distinguish between path satellites and prepositions. Prepositions require a complement, but satellites can appear intransitively (Talmy, 1985, p. 105). Navarro & Nicoladis (2005) state that L1 and L2 Spanish speakers obviously prefer conflating the path with intransitive verbs.

In this example, the deictic verb *come* is used with the adverb *along*, which constitutes a satellite. The path satellite *along* is connected to the deictic verb *come* to describe the appearance of the boy on the bike. It emphasizes the visible appearance of the object on the scene (Feiz, 2007). Examples 11 – 15 are from Feiz (2007).

(11) Introducing the boy on the bike with *come* – Speaker #3

A kid with a bi[^]ke, (.) comes alo:[^]ng, (...). O[^]kay so the ki[^]d's
on a new bi[^]ke, a[^]lso wearing a red scarf and a ha[^]t.

Manner expresses how the object moves. In English, verbs mainly indicate manner information (Billman, Swilley, & Krych 2000). English speakers typically use verbs that express information about manner, such as *skip* and *walk*, rather than path (e.g., *approach*, *ascend*), while Greek speakers use path verbs more, evidence that their language is a typical V-framed language (Papafragou, Hulbert, & Trueswell, 2008). “Manner is the way in which motion is accomplished. It includes different dimensions such as motor pattern (e.g., *hop*, *jump*, *skip*), rate motion (e.g., *walk*, *run*, *sprint*), force dynamics (e.g., *step*, *tread*, *tramp*), or attitude (e.g., *amble*, *saunter*, *stroll*), and encoding instrument (e.g., sled, ski, skateboard).” (Slobin, 2006).

Most of the examples below illustrate the way English indicates the manner and path in a single clause. In excerpt 12, the intransitive expression *ride away* encodes the path of motion separately from the verb through the satellite. The path satellite *away* is connected to the manner verb *ride*. The co-event of manner is presented through the verb *ride*:

(12) Intransitive motion in English – [verb: *ride away*]

en he (the boy) ri[^]des awa:[^]y, en he's not even looking
back to see if the gu:[^]y i:[^]s looking at him,=

In example 13, the adverb *down* is used as a path satellite that connects to the manner verb *climb* to encode the trajectory of the motion. *Down* encodes the direction of the pear picker:

(13) Path satellite in English

and then he (the pear picker) **climbs down** the la[^]dde[^]r.=
it's up next to the tree:[^],

In excerpt 14, the particle *back* used as a path satellite, which connects to the manner verb *walk*:

(14) Path satellite in English

A: nd e: so they walk- three boys **wa[^]lk back** towards where the o[^]ld
ma:[^]n -
the mi[^]ddle aged ma[^]n is pi[^]cking pea:[^]rs,

Moreover, more than one path satellite can be used in English, as illustrated in excerpt 15. Two path satellites *down off* are used with the deictic verb *come*, and three path satellites *back up into* are used with the manner verb *climb*.

(15) Multiple path satellites in English –Speaker #10

he:[^] **came do[^]wn off** of the ladde:[^]r, (.)
he was wearing a red sca[^]rf, (.)
he used the scarf to clea[^]n off the pea:[^]rs, (0.4)
a:nd he **climbed back u[^]p into** the tree:[^],

Inventory of Motion Verbs in Arabic, English by Native Speakers (L1) and English by Arabic speakers (L2)

In this section, I will present a general analysis of the verb inventories of motion verbs in Arabic, English by native speakers (L1) and English by Arabic speakers (L2), as outlined in table 3 below.

Motion verbs	
English	85
Arabic	26
English by Arabic speakers	21

Table 3: Breakdown of motion verbs by language

It can be seen that native English speakers use motion verbs more than three times as often as motion verbs used by Arabic speakers in Arabic or English.

Arabic Pear Stories

Fifteen narratives of the *Pear Film* story were elicited in Arabic from Arabic speakers. Twenty six different types of Arabic motion verbs were used, divided between fifteen intransitive verbs and eleven transitive verbs, as follows:

Intransitive

Path verbs are:

<i>yammer</i> "pass"	<i>sharad</i> "escape"
<i>yenzel</i> "descend"	<i>yedor</i> "move around"
<i>Raja</i> "turn around"	<i>yejles</i> "sit"
<i>rad</i> "return"	<i>yaqhef</i> "stop"
<i>abar</i> "cross"	<i>yenshedem</i> "hit"

Deictic verbs that indicate directionality are:

<i>yaroo</i> "go"	<i>yati</i> "come"
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Manner verbs are:

<i>Etkhardhaf</i> "tumble"	<i>yhather</i> "fly off"	<i>rakadh</i> "run"
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The one verb encoding directionality is:

yeqheh "fall"

Transitive

Path verbs are:

<i>yesaad</i> "help"	<i>yejeme</i> "collect"
<i>yekhamel</i> "complete"	<i>yasreq</i> "steal"
<i>yeqhadhee</i> "pick"	<i>yekhali</i> "leave"
<i>yehadhi</i> "put"	<i>yaqhdhef</i> "pickup"

Deictic verbs that indicate directionality are:

<i>yakheth</i> "take"	<i>yaadhi</i> "give"
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The lone manner verb is:

yerkab "ride"

The significant characteristic of this inventory is the huge number of the two intransitive verbs *yaroo* "go" (33) and *yeqheh* "fall" (32). The most frequent intransitive verbs used by Arabic speakers are *yaroo* "go," *yeqheh* "fall," *yammer* "pass," *yenzel* "descend," *raja* "turn around," and *rad* "return." Moreover, we notice a salient decrease from *yeqheh* "fall," with 32 tokens, to *yammer* "pass," with 26 tokens; and from *yammer* "pass" to *yenzel* "descend," with 14 tokens. However, the sharp decline in the transitive verbs occurs only between the first two frequent verbs that decrease from *yakheth* "take," with 28 tokens, to *yesaad* "help," with 12 tokens.

English Pear Stories by Arabic Speakers

I collected a total of fifteen English Pear narratives by Arabic speakers, and identified a total of 21 motion verbs: ten intransitive and eleven transitive. The most repeated verbs in each category of verb are as follows:

Intransitive: *pass, ride, return, move, sit, and stop*. *Go* and *come* are deictic verbs. *Walk* and *run* are manner verbs.

Transitive: *put, pick, help, steal, fill, hit, collect, leave, clean*. *Take* and *give* are deictic verbs.

The important characteristic of the inventory is the large number of tokens of the two intransitive verbs *pass* (39) and *go* (32). The most frequent intransitive English verbs used by Arabic speakers are *come, ride, and walk*. There is a decrease in the total number of tokens from the second most frequent verb, *go* (32) to the third most frequent verb, *come* (19), and a gradual decrease from *walk* (11) to *return* (2).

English Pear Stories by Native Speakers

Feiz (2007) elicited 15 English narratives of the *Pear Film* story produced by native speakers. The total number of English motion verbs is 85, with 40 intransitive verbs and 45 transitive verbs, as follows:

Intransitive: *walk, come, ride, go, and fall*. *Walk* and *ride* indicate manner. *Come, go, and fall* encode directionality.

Transitive: *put, pick, take, pick up, and give*. *Pick* encodes some degree of manner. *Pick up, take, and give* encode directionality.

The important feature of the inventory is the large number of the same intransitive verbs *walk* (71), *come* (46), *ride* (45), *go* (39), and *fall* (27). The most frequent intransitive English verbs used by native speakers are *walk, come, and ride*. We can also observe a sharp decrease from *walk*, with 71 tokens, to *come*, with 46 tokens; and from *go*, with 39 tokens, to *fall*, with 27 tokens. Some intransitive verbs are used only once by the participants: *kneel down, leave, jump off, hold on, splat, move (around), appear, bump into, spill, bounce, lean, blow off, wobble, Limp (off), smack (into), wobble, etc.* are finer-grained manner verbs. The same pattern of decrease is noticed in the transitive type (Feiz, 2007).

Conclusion

This paper is a comparative analysis of motion events surrounding space and manner in Arabic and English narratives elicited from native speakers after watching *Pear Film*. The analysis is based on Talmy's framework of motion events and his linguistic typology (satellite-framed languages and verb-framed languages). The emphasis of the analysis is on the main elements of motion, which are Figure, Path, Manner, and Ground.

I start with a brief discussion of Talmy's typology of satellite-framed and verb-framed languages. I then move on to providing some examples from Arabic

and English data elicitation. The instances presented from Arabic clearly show evidence of its being a verb-framed language. Likewise, in the following section the examples from English narratives by native speakers taken from Feiz's (2007) research indicate that English is a typical satellite-framed language. In the following section, I present an inventory of motion verbs in Arabic, in English by native speakers (L1), and in English by Arabic speakers (L2).

My conclusion based on the findings of this study is that Arabic is a V-framed language as defined by Talmy (2007). At the same time, some examples from the Arabic narratives express co-events of the motion event, which are manner and cause of movement. These are rarely used in Arabic. However, their linguistic patterns are different from Talmy's expected structures in his framework; for instance, using verbs that encode path and manner, such as *etkhardhaf* "tumbles," and using the prefix *t* to indicate manner, which does not fit into Talmy's classification of satellite-framed structures. Furthermore, in Arabic, prepositional phrases are used to encode cause.

Some implications will be discussed regarding Talmy's typology in the following paragraphs. Findings from some other studies, such as some done on Chinese, would seem to recommend revisiting Talmy's linguistics typology. The analysis of resultative verb compounds in Chinese poses a problem in Talmy's conceptual approach and his linguistic typology. Chinese speakers focus more on the result; however, English speakers pay attention more to the process of an event (Tai 2003).

Implications for Teaching English to Arabic Speakers

Because manner verbs are used rarely in Arabic, as noted earlier, some teaching strategies and materials should be used to teach Arabic learners of English manner verbs. One strategy for teaching English to native speakers of Arabic could be using some films that include a large variety of motion verbs, especially manner verbs, such as *Pear Film*. Some online stories could be used to teach children the manner verbs, such as those found at <http://www.storylineonline.net/>. Role-playing could be a strategy to learn some manner verbs in the classrooms, by acting out these verbs. Pictures could also be used to illustrate them.

In addition, Arabic learners need to learn the different semantics of some path satellites that are connected to manner or deictic verbs. For instance, some pictured short stories could be beneficial for children, such as those found at <http://www.magickeys.com/books/ollie/index.html>, to visualize and understand the meaning of manner verbs and path satellites.

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The Missing Response Patterns in the Ontario Secondary School Literacy Test

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Abstract

Large-scale assessments are often an important indicator of students' achievement for schools, states, and provinces. Missing responses can affect the appropriateness of our analysis models and the results of large-scale educational assessments. The study of missing response patterns (MRPs) can inform the design of a test and interpretation of test results. This study will examine the causes and effects of MRPs based on analyses of students' responses to the Ontario Secondary School Literacy Test (OSSLT) in 2006. This is a test with high stakes for students. With some preliminary statistical analyses in SPSS (descriptive statistics, plots, cross-tabs, and multinomial and logistic regressions), we are exploring possible causes of MRPs by examining the relationships between patterns of missing responses and responses to test items and background questionnaire items. All results will be helpful for us to understand more about the test's construct and internal validity to support improvement of the relevant large-scale assessment in the future.

Introduction

Large-scale assessments are often an important sign for schools, states, and provinces of students' achievement (Taylor & Tubianosa, 2001) and are valued by the general public for the accuracy and objectivity with which they can measure the effectiveness of students, schools, and teachers (Crundwell, 2005, p. 5). As Wolfe, Childs, and Elgie (2004) wrote, "When we talk about reporting assessment results, we assume that the students have responded to the test items. However, many students omit or provide unmarkable responses to one or more items" (p. 62). Missing Response Patterns (MRPs) in this research is a broad concept involving missing data, incomplete data, missing responses, omitted responses, neglected responses, nonresponse, and missingness. MRPs are important to consider in statistical analyses in educational measurement, social science, and medical studies (Toledano & Gatsonis, 1999), as they can significantly affect the results of the data analysis in large-scale assessment. The study of MRPs can inform our understanding of the design, validity, and uses of large-scale assessment.

Missing responses can affect the appropriateness of our analysis models and the results of large-scale educational assessments. For example, many analyses make strong assumptions about the causes of the missing data, such as assuming that a missing response is equivalent to an incorrect response, which may be

particularly problematic when subgroups of examinees (e.g., those grouped by language or gender) differ in their patterns of nonresponse (Emenogu, Falenchuk, & Childs, 2010). Also, much valuable information can be found from examining patterns of missing data. The study of MRPs can inform the design of a test and the interpretation of test results. This study will examine the causes and effects of MRPs based on analyses of students' responses to the 2006 Ontario Secondary School Literacy Test (OSSLT). The OSSLT is "a cross-curricular literacy test issued to all secondary school students in the province of Ontario" and "consists of a reading and a writing component, both of which must be successfully completed for secondary school graduation in Ontario" (Cheng, Fox, & Zheng, 2007, p. 67). In an information session before the test, teachers were required to read the following statement to students: "Answer all the test questions. Not answering questions or leaving a writing task blank will reduce your chances of success" (EQA, 2006, p. 33). During the test administration, the students were reminded, "Answer all the questions in each section" (p. 35). Although the OSSLT is a high-stakes test required for students' graduation from high school, based on our study, there are nevertheless a few missing response patterns.

We have two research questions in this project: (1) How do the MRPs change across the test items and structure? (2) How are these changes related to students' characteristics? With some preliminary statistical analyses in SPSS (descriptive statistics, plots, and cross-tabulations or cross-tabs), we explore possible causes of MRPs by examining the relationships between patterns of missing responses and responses to test items and background questionnaire items. All results will be helpful for us to understand more about the test's construct and internal validity to support improvement of the relevant large-scale assessment in the future.

Literature Review

In 1987, Little and Rubin stated that the typical classifications of MRPs are *missing at random*, *missing completely at random*, and *not missing at random*. Although many analyses assume that data are either missing at random or missing completely at random, in fact, it is likely that most examinee nonresponse on large-scale assessments is not missing at random. For example, Ludlow and O'Leary (1999) suggested that different MRPs may indicate different test-taking strategies. These strategies may affect the number of items any individual examinee attempts. Also, examinees' ability estimates will be affected by their test-taking strategies and so will be less comparable across groups if the strategies differ across groups.

Some researchers have studied the effects of the treatments of MRPs (e.g., deleting cases that are incomplete, scoring missing responses as wrong, ignoring missing responses) on assessment results. For example, Emenogu, Falenchuk, and Childs (2010) studied the effect of the treatment of MRPs on Mantel-Haenszel DIF detection. Many researchers have used simulations to study the effects of MRPs in the models. Some researchers have studied the effect of MRPs on statistical and theoretical models such as regression and factor analysis. Kamakura and Wedel (2000) studied the estimation of factor models and the imputation of MRPs, and

proposed an approach that provided direct estimates of factor weights without the replacement of MRPs with imputed values.

Some studies have investigated the possible causes of MRPs, including the relationship between MRPs and examinees' characteristics or attitudes. For example, Grandy (1987) examined group differences in MRPs by gender. Zhu and Thompson (1995) also examined differences by racial/ethnic groups and the relationship between MRPs and performance on the items. Recently, Chuah and Linden (2008) studied examinees' aberrant responses by combining response-pattern and response-time data. Wise and DeMars (2008) also showed a relationship between examinee noneffort and the validity of program assessment results. On the other hand, MRPs may be related to test items (Draney & Wilson, 2004, p. 1). For example, Xu (2005) suggested that nonresponse rates are related to item format, gender, language, and culture. Choppin (1974) studied student response patterns on an international survey of academic standards and found that students from England and the US were more likely to guess than those from European countries such as France and Sweden. Zhu and Thompson (1995) found that White students were most likely to respond to all items on a multiple-choice assessment, followed by Asian students and Hispanic students; African-American students had the highest nonresponse rates. In TIMSS 1995, the students from Denmark and some East Asian countries tended to leave an item blank if they did not know how to answer it, while students from the US had a relatively larger proportion of random guesses (Xie, 2005). Students who omit more items on the test may not have less knowledge or fewer skills, but they may be more reluctant to try to answer when they are not certain of the answer. Different test-taking strategies can occur in a systematic manner due to differential cultural origin and instructional emphasis or some other unknown factors. Wise and DeMars (2008) also found a relationship between examinee noneffort and the validity of program assessment results. A demands-capacity model of test-taking effort proposed by Wise and Smith (2011) considered a test as a series of examinee-item encounters. Also, some researchers have considered MRPs, correct responses, and wrong responses together. For example, Schmidt, Wolfe, & Kifer (1993) used a triangle graphic to show the relationship among MRPs, correct responses, and wrong responses (p. 93).

In addition, some researchers are interested in the relationship between literacy and MRPs. For example, Brown and his colleagues (1996) studied the relationship between literacy performance and MPRs. They found that the lower the levels of adults' literacy skills, the more MRPs they have. In this paper we will apply relevant theories from previous studies to real data from the Ontario provincial large-scale assessment, the Ontario Secondary School Literacy Test, administered in 2006.

Research Methods

Combining broad theories in educational measurement, educational statistics, and pedagogy (curriculum, teaching, and learning), this project employed different methods for its different subquestions.

Data Sources

Davey and Savla (2010) wrote, “Data collection from human beings in the real world poses considerably greater challenges than in the laboratory setting” (p. 47). Nevertheless, this quantitative study mainly employed real data. This study analyzed the data from the 2006 OSSLT, developed by Ontario’s Education Quality and Accountability Office (EQAO). About a third of the population of Canada lives in Ontario and Ontario’s testing program “illustrate[s] the divergent uses of large-scale assessments in Canada throughout the twentieth century” (Klinger, DeLuca, & Miller, 2008, p. 3).

The 2006 OSSLT included an English version (190,758 test-takers) and a French version (6,539 test-takers). After data cleaning, we finalized the data for this study as 190,480 students, retaining only the students who answered the English-language version of the test, those who were taking the test when they were first eligible (students take the test for the first time when they are in Grade 10 and can retake it in subsequent years), and those who did not receive accommodations.

The 2006 OSSLT had 62 items (questions) and was structured as shown in Table 1. We selected different types of items for various studies.

Types of Items	Booklet 1	Booklet 2
Multiple Choice (MC) Items	23	25
Open Response (OR) Items	2	4
Short Writing (SW) Items	4	0
Long Writing (LW) Items	2	2
Total	31	31

Table 1. The Structure of the OSSLT

Our study focused on the 48 multiple-choice (MC) items. We created several indicators of missing response patterns for use in the analyses, such as number of missing responses in open-response (OR) items, number of missing responses in short writing (SW) items and long writing (LW) items, number of missing responses in multiple-choice items, number of missing responses in all types of items, number of items not reached at the end in Booklet 1, number of items not reached at the end in Booklet 2, number of items omitted in Booklet 1, and number of items omitted in Booklet 2. In addition, we computed the number of items of each type answered correctly.

Methods for Data Analysis

We analyzed the percentages and empirical distributions of MRPs, and drew some statistical graphs such as bar graphs, histograms, line graphs, and scatter plots. We analyzed the relationships between MRPs and students’ characteristics, demographic

information and their relevant survey responses. We also looked at the observed factors in one-way analysis of variance (*ANOVA*). We undertook statistical analysis of the whole database using the statistical software package SPSS 17.

We employed some preliminary statistical analyses that are related to MRPs, such as descriptive statistics, plots, and cross-tabs. We explored possible causes of the MRPs by examining the relationships between them and responses to test items and background questionnaire items. In the study of MRPs, there were two foci: the item level, and the student level.

In summary, this study probed the factors possibly affecting the MRPs. After descriptive analysis of MRPs and individual student characteristics, we looked for the following two types of MRPs, which are related to our two research questions:

- MRPs by item across students—we studied them for each individual item across all students; and
- MRPs by student across items—we studied them for each student across all items

Results

We will introduce our data analysis results in two parts, which are related to the MRPs by item and by student, as explained above. Based on our descriptive analysis, we obtained the following results: For all six open-response items, 87.1% of the students answered all the items; 7.7% did not answer just one item; 1.9% did not answer two items; and 1.5% did not answer three or more. For the four writing items, 4.0% of the students did not answer one of the items and 1.0% did not answer two or more. For the multiple-choice items, 95.7% of the students answered all the items and less than 0.5% did not answer more than five MC items.

Study 1: The Investigation of MRPs by Item across Students

According to the literature review and our previous studies, MRPs may be related to a test's items and its structure. Therefore, corresponding to our first research question, we undertook a series of analyses to investigate this.

1. MRPs differ by item

Figure 1 shows the percentage of students who did not answer each MC item. The items are ordered as they appeared on the test; those in Booklet 1 begin with B1 and those in Booklet 2 begin with B2. We found that the percentage of students who did not answer an item ranged from 0.2 to 1.2%. However, this trend was not very stable. At the beginning, the percentages were higher and then went down. They went up suddenly at the beginning of the second section in Booklet 1. The switching point between sections at the beginning of Booklet 2 brought the second significant rise in the percentage of students not answering each item. Also, we found that the trend in Booklet 1 was much less stable than that in Booklet 2.

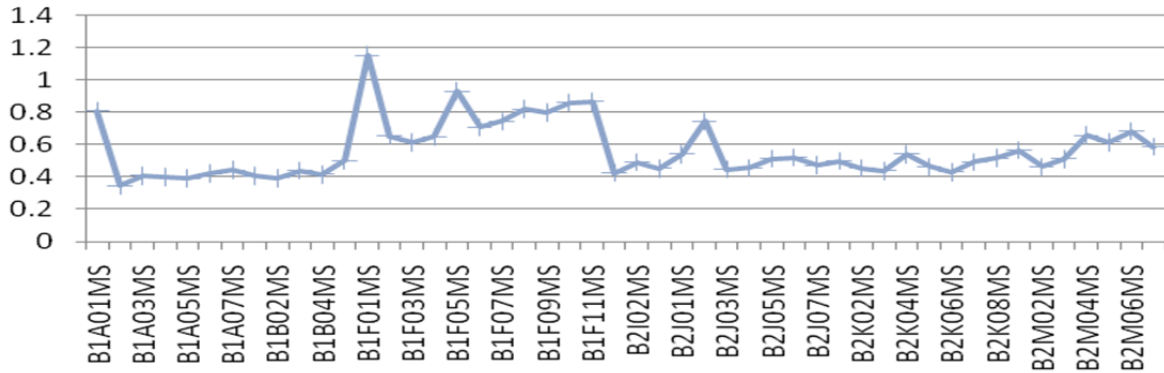


Figure 1. The percentage of students not responding to each item

2. *MRPs – The gap between correct responses and incorrect responses*

When we study the responses to items and tests with a holistic approach to large-scale assessment, we need to consider the relationships among correct responses, incorrect responses, and missing responses together.

For each item, we know that the sum of the percentages of correct responses, incorrect responses, and missing responses should be 100%. Graphically, if we plot the percentage correct for each item as the distance from the bottom and the percentage incorrect as the distance from the top, then the gap between these lines is the percentage missing. Appendix I provides such a graph, but the gaps are small and so are difficult to see.

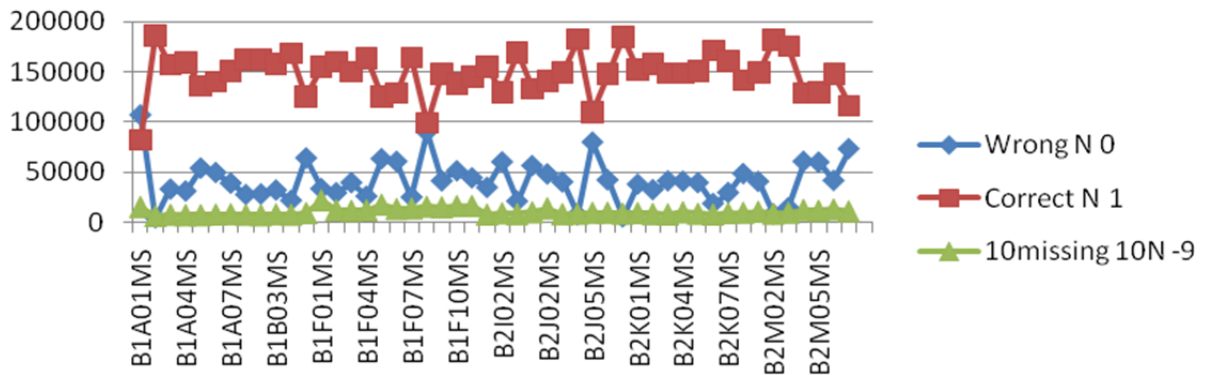


Figure 2. For each item, the percentage of students answering correctly, the percentage answering incorrectly, and 10 times the percentage with missing responses

In Figure 2, both the percentage of students answering correctly and the percentage of students answering incorrectly are plotted vertically from the bottom of the graph. To make the pattern of missing responses clearer, the missing responses were amplified by multiplying the percentage by 10. A correlation analysis confirms the patterns seen in this figure. The correlation between correct responses and incorrect responses is $r = -1.000, p < .01$. The percentage of students missing responses to each item is also significantly correlated with both the percentage of students answering correctly ($r = -.419, p < .01$) and the percentage of students answering incorrectly ($r = .407, p < .01$).

3. Item difficulty and MRPs

According to the results above, the percentage of students answering an item correctly is negatively correlated to the percentage of students not answering the item. Here, we wanted to analyze further to see how the percentage of students not answering an item was related to the item's difficulty. Item difficulty is simply the percentage of students taking the test who answered the item correctly. The larger the percentage of respondents getting an item right, the easier the item. The higher the difficulty index, the easier the item is understood to be (Crocker & Algina, 1986; Matlock-Hetzel, 1997; Wood, 1960). We computed the item difficulty by dividing the number of people answering the item correctly by the total number of responses to the item, ignoring the missing responses. Based on our data, we obtained Figure 3.

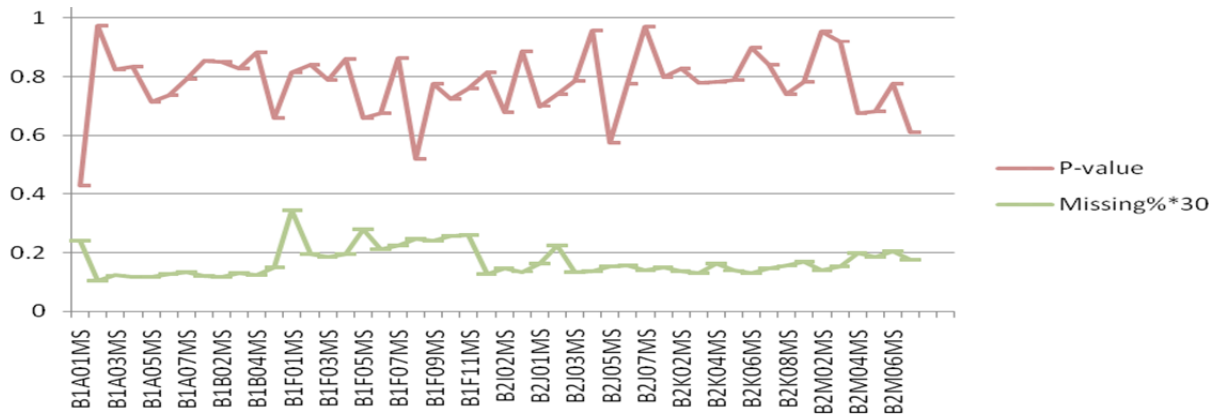


Figure 3. For each item, the item difficulty (percentage of students answering correctly out of students who responded to the item) and 30 times the percentage with missing responses.

4. The skill requirements of items and MRPs

The 2006 OSSLT was created to have different skill requirements for each question. Reading was defined as the process through which the reader actively makes meaning for a variety of written texts. Students were expected to understand the texts used in the OSSLT according to the expectations in the Ontario Curriculum across all subjects up to the end of Grade 9. Writing was defined as the constructive process of communicating in the written forms expected of students in the Ontario Curriculum across all subjects up to the end of Grade 9. Writing skills were evaluated on the 2006 OSSLT through a combination of multiple-choice questions and short and long writing tasks (EQAO, 2006). Table 2 summarizes the three reading and four writing skills.

Targeted Skill	Code	Skill Category
Reading Skill 1	R1	understanding explicitly stated information and ideas
Reading Skill 2	R2	understanding implicitly stated information and ideas (making inferences)
Reading Skill 3	R3	making connections between information and ideas in a reading selection and personal knowledge and experience (interpreting reading selections by integrating information and ideas in a reading selection with personal knowledge and experience)
Writing Skill 1	W1	developing a main idea with sufficient supporting details
Writing Skill 2	W2	organizing information and ideas in a coherent manner
Writing Skill 3	W3	using conventions (spelling, grammar, punctuation) in a manner that does not distract from clear communication
Writing Skill 4	W4	topic development (main idea, supporting details and organization)

Table 2. Targeted Skills. Note. Adapted from EQAO (2005), p. 4; W4 is not measured by the MC items.

We analyzed whether the MRPs showed significant differences among these skills. Appendix II summarizes the data for analysis, from which we drew Figure 4.

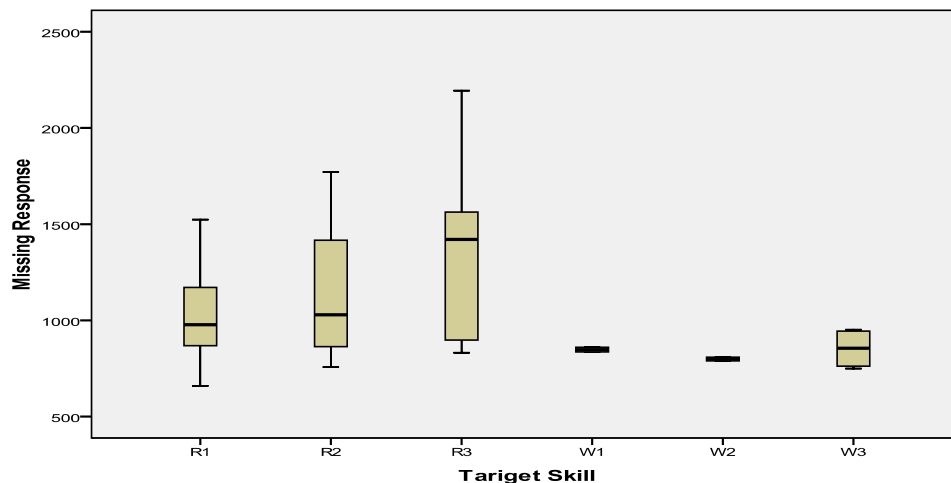


Figure 4. Percentage of missing responses by six targeted literacy skills in reading and writing

An ANOVA of the targeted literacy skills classified as reading and writing found a significant difference between the missing response rates for reading ($M = 0.294\%$, $SD = 0.028\%$) and writing ($M = 0.123\%$, $SD = 0.059\%$) skills, $F(1,42) = 5.096$, $p = .029$. The interaction between skill and type of skill (reading or writing) was not significant, $F(4,42) = 1.669$, $p = .175$. The variance was much larger for the three reading skills than for the writing skills. The writing skills were measured by far fewer items than the reading skills, however.

5. “Not reached” items and MRPs

We also studied another interesting trend of MRPs: not reached by the end. Shin (2009) studied the impact of different scoring methods on IRT-based true score equating. The study recommended that omitted and not-reached items should be ignored or left blank, and not scored as incorrect. The study also found that the benefits of treating omitted and not-reached items as blank or missing increased as the sample size increased. Going over the whole test, we found that some students stopped answering questions from a certain point forward. Along with their growing numbers of MRPs, examinees skip more items by the end of the two booklets. Based on this list, we have many questions to answer. For example, there were some items and sequences of items that showed a high frequency of omits. Why? Was there evidence of correlation of omitting for nonadjacent items? Carefully studying this list helped us find many interesting results. Looking back at these patterns, we found most of them belonged to “not reached by the end” patterns. Those examinees with more MRPs skip more items by the end of the two booklets combined.

Number of Items “Not Reached” at the End of the Booklet	Booklet 1		Booklet 2	
	Number of Students	%	Number of Students	%
0	186,449	97.88377%	178,255	93.58200%
1	2,331	1.22375%	8,230	1.53664%
2	205	0.10762%	2927	1.53664%
3	115	0.06037%	124	0.06510%
4	74	0.03885%	44	0.02310%
5	61	0.03202%	26	0.01365%
6	62	0.03255%	20	0.01050%
7	58	0.03045%	79	0.04147%
8	42	0.02205%	19	0.00997%
9	24	0.01260%	756	0.39689%
10	34	0.01785%		0.00000%
11	1,025	0.53811%		0.00000%
Total	190,480	100.00000%	190,480	100.00000%

Table 3. “Not Reached” Patterns

We can see these trends in Figure 5: Booklet 2 had significantly more students who did not reach items than Booklet 1.

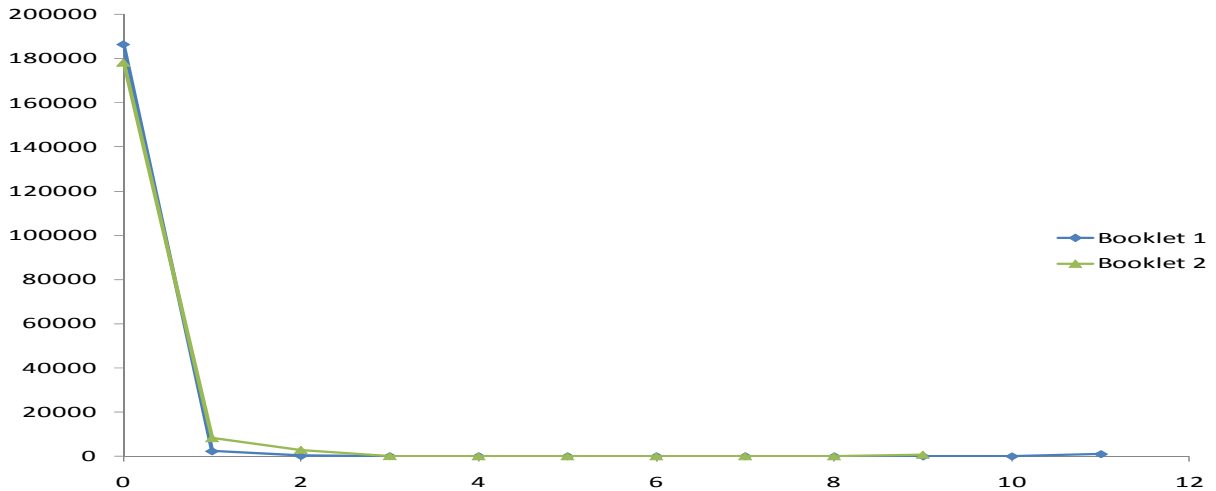


Figure 5. Numbers of students not reaching items in the two booklets

We also suspected that the MRPs had some relationship with an item's wording and length. We will continue to study these areas in the future.

Study 2 – The investigation of MRPs by student across items

The second part of this study focused on the individual students' MRPs and probed broadly the relationships between MRPs and other factors.

1. Distribution of MRPs by student

For all students, we computed their total number of missing responses for all items; the distribution is shown in Figure 6. Overall, 86.2% of students did not have any missing items, 95.5% of the examinees missed less than 3 items, and only 1% of examinees had more than 10 items missing. Also, we found that 427 examinees (.02%) missed all 62 items and they gave us only their names.

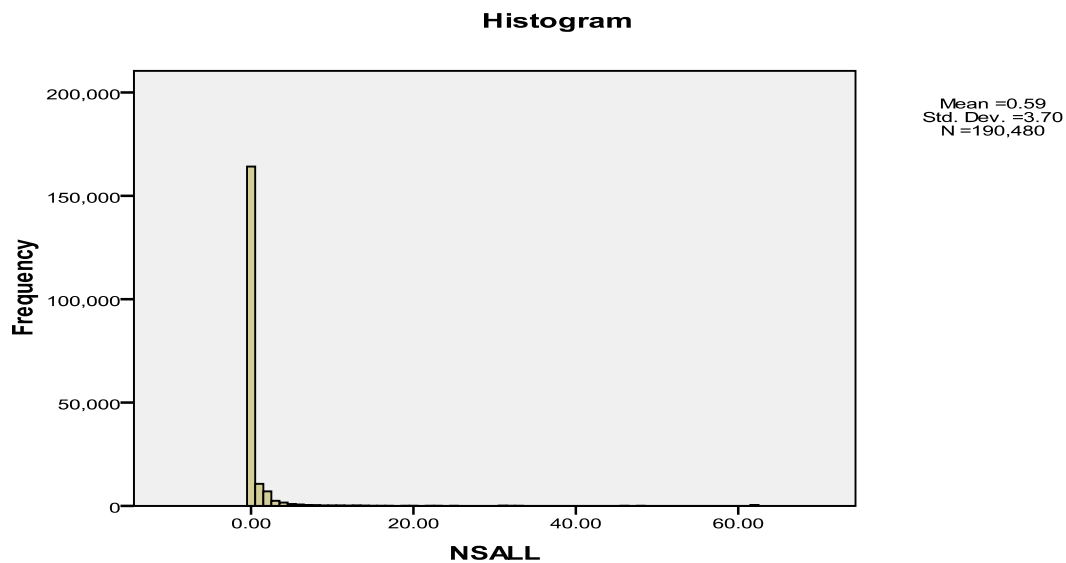


Figure 6. Distribution of students' total number of missing responses

A student's total score as reported by the EQAO and his or her total number of missing responses had a significant negative correlation, $r = -.316$, $p < .001$. This means that the more items a student missed, the lower his or her total score.

2. MRPs and skills

In order to investigate the relationships between each student's total number of missing responses and the targeted skills R1, R2, R3, W1, W2, and W3, we created six variables that indicated the total number of items measuring each skill that were answered correctly. All skills were significantly negatively correlated with the total number of missing responses. Students' total score in Reading Skills 1 and Reading Skills 2 had the largest correlations ($r = -.229$, $p < .001$ and $r = -.248$, $p < .001$) and Writing Skill 3 had the smallest correlation ($r = -.118$, $p < .001$) with students' total number of missing responses.

3. MRPs and individual characteristics (group differences)

Based on previous studies, we know that MRPs may be related to students' background information. Many researchers have also found that MRPs have significant differences among different groups. The 2006 OSSLT obtained relevant background information from students using a survey. We undertook broad identification of these variables. Here, we show some of them.

a) Gender and MRPs

We investigated the relationship between MRPs and student background information. The number of MC items not answered was not significantly different between male and female students. However, the number of items of any type not reached at the ends of the booklets was significantly different by gender. Males ($M =$

0.69, $SD = 3.91$) had significantly higher numbers of missing items than females ($M = 0.48$, $SD = 3.45$), $t(190,342) = 12.14$, $p < .001$, $d = 0.06$.

b) Language background

Ontario has many students who have immigrated there with their parents. Therefore, these students have various original language backgrounds. We were interested in whether this language background and MRPs had a significant correlation. Other studies have found that the performance of ESL/ELD students is consistently and similarly lower across item formats, reading text types, skills and strategies, and the four writing tasks (Cheng, Klinger, & Zheng, 2007; Fox & Cheng, 2007). Therefore, this study examined the MRPs for students who were classified by their schools as English as a Second Language (ESL) learners or English Literacy Development (ELD) learners, that is, students who were receiving instruction designed to help them improve their skills in reading, writing, and oral communication in English (Ontario Ministry of Education, 2002, p. 2).

Students who were classified as ESL/ELD had significantly more missing items ($N = 8,482$, $M = 1.16$, $SD = 4.49$) than other students ($N = 181,998$, $M = 0.56$, $SD = 3.66$)—in fact, about twice as many: $t(9,013) = 12.17$, $p < .001$, $d = 0.15$. Furthermore, the variance in ESL students' MRPs was much larger than for other students.

Family language background (responses to the question “Languages you speak at home”) also had significant differences for MRPs, $t(72,246) = 26.67$, $p < .001$, $d = 0.15$. Examinees who spoke only English at home ($M = 0.31$, $SD = 1.53$) had less missing data than others ($M = 0.59$, $SD = 2.13$).

c) IEPs and MRPs

Students who had an Individual Education Plan (IEP) had special needs (e.g., behavior difficulties, autism, deaf or hard of hearing, blind or low vision, learning disabilities); some of these students also required accommodations (e.g. time, seating, and so on). Students with IEPs ($M = 0.90$, $SD = 4.56$) had significantly higher MRPs than others ($M = 0.53$, $SD = 3.50$), $t(39664) = 13.89$, $p < .001$, $d = 0.09$.

d) Home computer use and MRPs

Finally, students who used a computer every day at home ($N = 60,152$, $M = 0.27$, $SD = 1.33$) were compared with students who did not ($N = 127,159$, $M = 0.44$, $SD = 1.87$). The students who did not use computers at home daily had significantly more missing data, $t(159,527) = 21.89$, $p < .001$, $d = 0.10$.

4. Rates of Nonresponse and Their Relationship to Personal Characteristics

To investigate the relationship between the number of items to which a student did not respond and the student's characteristics, including gender and whether the student was taking applied or academic programs and others, while controlling for the students' ability estimate based on the 48 MC items, we performed a sequence of multinomial and logistic regressions. Table 4 provides the results of an analysis in

which the outcome variable represents five levels of missing responses: 0, 1, 2, 3, or 4 or more.

Parameter	<i>B</i>	<i>SE</i>	Wald Chi-Square
Thresholds			
Missing = 0	3.364	.0626	2891.809***
Missing = 1	4.674	.0651	5161.948***
Missing = 2	5.187	.0673	5949.595***
Missing = 3	5.479	.0690	6297.108***
Theta (θ)	-4.29	.0151	805.018***
Program: Applied	.216	.0310	48.516***
Program: Academic	-.112	.0312	12.875***
Program: Unknown	0	.	.
IEP or Disability: No	-.164	.0666	6.042*
IEP or Disability: Yes	0	.	.
Accommodations: No	.267	.0699	14.597***
Accommodations: Yes	0	.	.
Only English at Home: No	.448	.0259	299.222***
Only English at Home: Yes	0 ^a	.	.
English Language Learner: No	.030	.0464	.419
English Language Learner: Yes	0	.	.
Gender: Female	-.122	.0231	27.890***
Gender: Male	0	.	.
(Scale)	1		

Table 4. Multinomial regression of number of missing responses (categorized) on students' characteristics. Note. *df* for all chi-square tests is 1. * $p < .05$; ** $p < .01$; * $p < .001$.**

We applied a 3-PL IRT model in the relevant analysis. The ability estimate, θ , was included in the model as a covariate because analyses reported earlier indicated that many variables in the model had strong relations with θ . The *B* parameter of -.429 confirmed that θ was negatively related to the number of missing responses.

Controlling for θ , a student's academic program, whether he or she had an IEP (except for gifted programs) or disability, whether he or she received accommodations on the test, and gender were significantly correlated with the categorized number of missing responses. In particular, students taking courses in the applied program had more missing responses than those with an unknown program, while students in the academic program had fewer missing responses. Students without an IEP or identified disability had fewer missing responses. Students without accommodations on the test had more missing responses. Students who spoke a language other than or in addition to English at home had

more missing responses. Females had fewer missing responses. Identification of a student by their school as an English Language Learner when the OSSLT was administered was not a significant predictor of number of missing responses.

Conclusion

We believe a holistic approach to assessment should include studies of correct responses, incorrect responses, and nonresponse altogether. Given that MRPs are underaddressed in research, we hope our focus on them can help fill this gap.

We believe that many benefits can be expected from this study. We investigated the MRPs in the OSSLT, a test with high stakes for students. We broadly investigated the MRPs and MC items in the OSSLT and found some interesting results in areas such as MSPs, IRT, item difficulty level, item orders, and test structure. These results will help test-makers improve this test. For each item on the OSSLT, the rate of MRPs was lower than 1.2%. According to traditional treatment, the MRPs could be considered as missing at random. However, based on our results, MRPs have a very strong relationship with different groups such as gender, IEP, whether students were taking the test for the first time, computer use at home, and other variables. Therefore, even though the rates of MRPs were very low, student characteristics still had some effects on them. All these results will be helpful for us to understand more about the test's construct and internal validity. Furthermore, the results of this study (for instance, the causes of unanswered questions in the test) can also have meaningful pedagogical implications for the teaching and learning process. For example, gender differences are related to some differences in MRPs. Therefore, in classroom learning, a teacher might often remind boys to stay on task. Also, we found that the first items in each test's section have higher MRPs. We need to take care of students' psychological performance when they start any test, project, or assignment, for instance by reminding them to calm down and focus on their work as soon as possible at the beginning of their task.

Based on our current analyses of MRPs, we will continue our study and try to get more useful results to support improvement of the relevant large-scale assessments. This study focused on the analysis of missing response patterns in the OSSLT 2006. However, this is not the final goal for our studies. It is necessary to apply these results to the development of large-scale assessments, the improvement of teaching and learning, and the informing of policy. These are future directions for study.

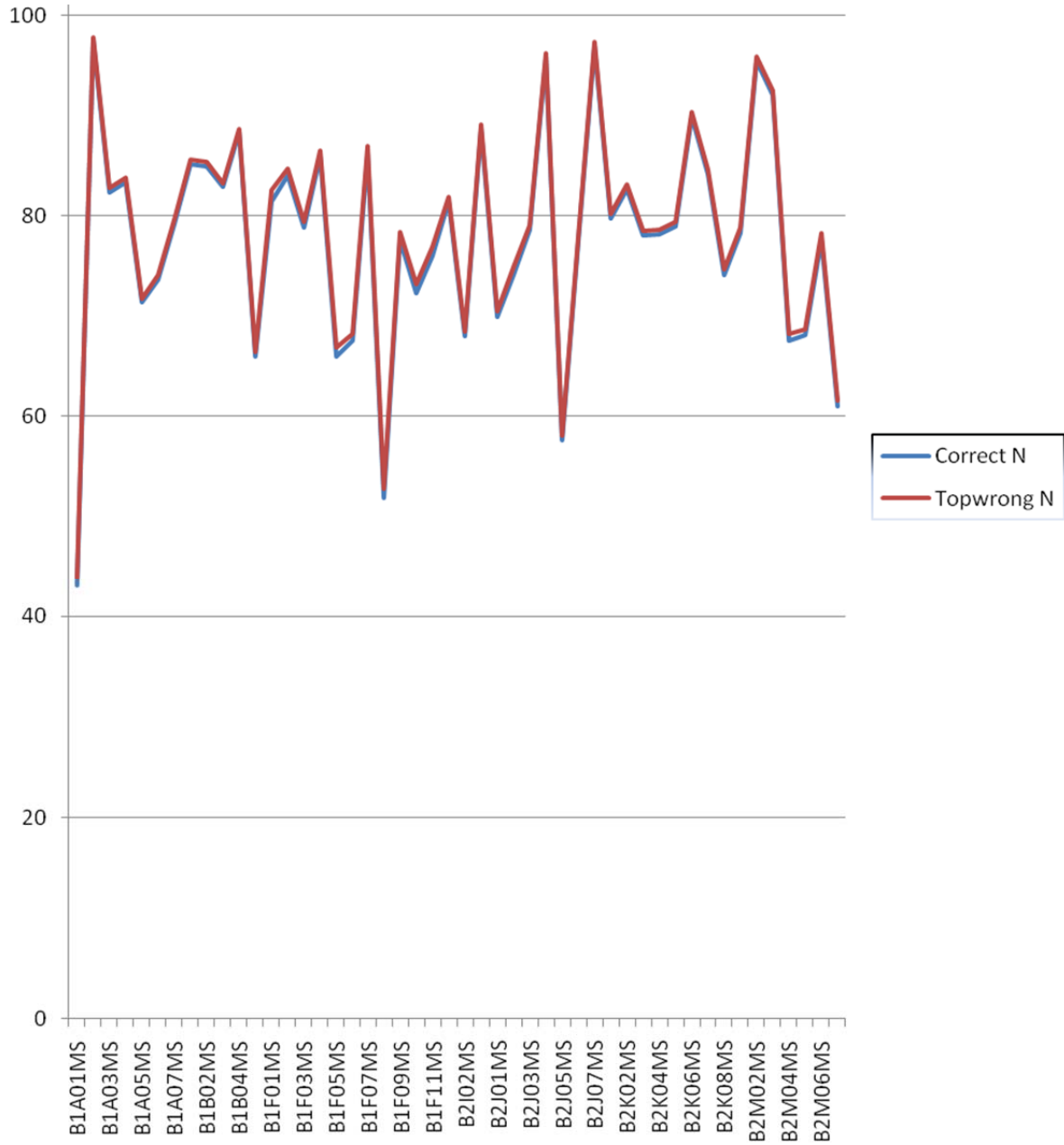
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Appendix I



Appendix 2

Item	Correct	Incorrect	Missing	Skill
B1A01MS	106982	81960	1538	R3
B1A02MS	4118	185702	660	R1
B1A03MS	32793	156909	778	R1
B1A04MS	30874	158849	757	R2
B1A05MS	53771	135964	745	R1
B1A06MS	49375	140303	802	R2
B1A07MS	38774	150861	845	R2
B1B01MS	27401	162304	775	W3
B1B02MS	27925	161805	750	W3
B1B03MS	31842	157802	836	W1
B1B04MS	21550	168140	790	W2
B1B05MS	63963	125565	952	W3
B1F01MS	33243	155043	2194	R3
B1F02MS	29130	160105	1245	R1
B1F03MS	39215	150095	1170	R2
B1F04MS	25647	163598	1235	R1
B1F05MS	63117	125592	1771	R2
B1F06MS	60463	128669	1348	R1
B1F07MS	24838	164225	1417	R2
B1F08MS	90017	98900	1563	R3
B1F09MS	41146	147810	1524	R1
B1F10MS	51096	137744	1640	R2
B1F11MS	44066	144765	1649	R2
B2I01MS	34508	155163	809	W2
B2I02MS	60036	129508	936	W3
B2I03MS	20770	168850	860	W1
B2J01MS	56209	133242	1029	R2
B2J02MS	47915	141148	1417	R2
B2J03MS	39951	149677	852	R1
B2J04MS	7217	182394	869	R1
B2J05MS	79792	109710	978	R1
B2J06MS	42002	147485	993	R2

B2J07MS	4970	184612	898	R3
B2K01MS	37682	151848	950	R2
B2K02MS	32251	157365	864	R2
B2K03MS	41034	148614	832	R3
B2K04MS	40643	148807	1030	R2
B2K05MS	39173	150426	881	R1
B2K06MS	18368	171291	821	R2
B2K07MS	29334	160208	938	R1
B2K08MS	48259	141237	984	R1
B2M01MS	40416	148987	1077	R1
B2M02MS	7824	181773	883	R2
B2M03MS	14280	175226	974	R1
B2M04MS	60544	128683	1253	R2
B2M05MS	59629	129680	1171	R1
B2M06MS	41429	147748	1303	R3
B2M07MS	73148	116214	1118	R1

Exploring Metacognitive Online Reading Strategies among University Students in Four Nonnative English Speaking Countries

Yoo-Jean Lee
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Vichea In

Abstract

In this cross-cultural study, the researchers investigated metacognitive online reading strategies of students from four countries: Cambodia, Thailand, South Korea, and Kenya. An online self-report survey of reading strategies (OSORS) was administered to 132 university students from the four countries. The self-report survey tool was then complemented through a think-aloud procedure administered to eight randomly selected students. The students were instructed to “speak out” their thoughts as they navigated around an online text. ANOVAs were applied to examine whether there were significant differences in the students’ use of strategies from the different countries. The researchers also analyzed the think-aloud outputs from each student to determine the strategies that were used. The findings show that the students from the four countries differed significantly only in their use of global online reading strategies, but not in their use of problem-solving and support strategies.

Introduction

A number of studies have examined online reading comprehension among native-English-speaking students (Coiro & Dobler, 2007; Corio, Knobel, Lankshear & Leu, 2008; Leu, Kinzer, Coiro & Cammack, 2004; Leu, Zawilinski, Castek, Banerjee, Housland, Liu & O’Neil, 2007), but few, if any, have attempted to replicate similar research among nonnative-English-speaking students. Based on a self-reported survey, Anderson (2003) documented metacognitive online reading strategies among ESL and EFL students. A major limitation of that study is that it relied on self-reported data. This study supplements self-reporting with think-aloud data, and attempts to compare the use of strategies among college students from four different countries. Using the think-aloud data to triangulate with the survey data provides new insights into metacognitive online reading strategies and the use of the self-reported survey method to document the strategies.

This study seeks to answer the following two questions:

1. What metacognitive online reading strategies do students in different countries report using?
2. How do students in different countries use metacognitive online reading strategies?

Literature Review

An extensive body of research has established an inextricable relationship between readers' strategies and reading comprehension (e.g. Carrell, 1988; Sizoo, Malhotra & Bearson, 2003). These studies agree that the effective use of reading strategies contributes to reading comprehension. Thus, what expert readers do has received a great deal of attention from many research studies which argue that readers' high levels of reading comprehension are of particular relevance to their cognitive effort, referred to as metacognitive processing (Bazerman, 1985; Pressley & Afflerbach, 1995). Brown (1980) defines metacognition as "the deliberate conscious control of one's own cognitive actions" (p. 453). During reading, metacognitive strategies are employed to "oversee, regulate, and direct the language learning task, and invoke thinking about the learning process" (Vandergrift, 2002, p. 559). Research suggests that the use of metacognitive reading strategies can help readers overcome problems they encounter and ultimately achieve reading comprehension.

Sheorey and Mokhtari (2001) developed the Survey of Reading Strategies (SORS) to discover offline reading strategies used by post-secondary students. They tried to find differences in metacognitive awareness of reading strategies between ESL and college students studying in the United States and native-English-speaking American college students. They also looked at whether there were differences based on gender. However, the SORS was designed to measure not only metacognitive strategies but also other strategies such as cognitive and support strategies. Nonetheless, the authors did not explain how students' use of metacognitive, cognitive, and support strategies were similar or different.

Based on the SORS, Anderson (2003) created Online Survey of Reading Strategies (OSORS) to compare ESL and EFL students' different use of metacognitive online reading strategies. Even though the research attempted to examine the role of strategies used by second-language readers within the context of online reading tasks, it merely reported the results of the OSORS, and failed to discuss individual students' differences as well as their actual use of strategies when undertaking online reading tasks. With this information, the research would have provided a more detailed explanation of how students employed the strategies they reported using.

Relative to the new literacies perspective, Coiro and Dobler (2007) explored online cognitive processes for reading comprehension. They focused on how 11 advanced-level sixth-graders searched for and located information on the Internet through given online reading texts and comprehension questions, and what kinds of cognitive strategies they employed. They also conducted in-depth interviews with all students, and used think-aloud protocols while reading. Coiro and Dobler included

only advanced-level students as participants and observed how the students did while reading two academic reading texts.

There is limited information on the role played by metacognitive strategies in the online reading contexts, particularly in reading among second-language speakers of English. By determining the metacognitive reading strategies of second-language English speakers in other parts of the world, the present researchers hope to offer significant information for language teachers and researchers in nonnative-English-speaking countries.

Theoretical Framework

The theories that guide this study are based on the notions of metacognition and learning (Anderson, 2003), those that underlie reading of multimodal texts in a new literacies framework (Gee, 1999; Street, 1984), and cognitive flexibility theory (Spiro, Fletovich, Jacobson & Coulson, 1991).

Reading employs metacognitive tools and generally involves planning, monitoring, and evaluating (Anderson, 2002; Anderson, 2003; O'Malley & Chamot, 1990). Online reading comprehension processing requires functions such as developing important questions, locating, critically analyzing, synthesizing, and communicating information (Leu & Swilinski, 2007); all these are metacognitive strategies. Metacognition is simply defined as thinking about thinking (Anderson, 2008), and has to do with the control of cognitive processes that are used in learning (Livingston, 1997). It can also be viewed as two simultaneous things that take place as one engages in a task, *thinking-in* the process and *thinking-of* the process. Flavell (1979) defines metacognition as constituting the three components of *knowledge of self*, *knowledge of task*, and *knowledge of strategies*. Based on the notions of metacognition, the current study will focus on how the participants who are engaged in online reading reflect on their own cognitive processes, and how they monitor and regulate their use of cognitive processes.

In a new literacies paradigm, online reading is viewed as an engagement with multimodal texts (Pahl & Rowsell, 2005). Online reading employs the use of multimodal media with several modes of communication, such as speech, writing, and graphic images, in an integrated way to convey meaning (Kress & Leeuwen, 2001). Reading strategies that are different from traditional reading strategies will be required for online readers to develop questions, and to locate, evaluate, combine, and communicate information on the Internet (Leu et al., 2004). Recent research studies embracing a *new literacy studies* paradigm have tried to address the question of what new skills, strategies and dispositions are necessary for online learning. Castek et al. (2007) further note that the nature of literacy is constantly changing, and that more research is focusing on how the Internet and other social practices are redefining literacy.

Harnessing together the theories that guide the notions of metacognition and those that underlie reading of multimodal online texts are theories of cognitive flexibility which account for the ability to “adaptively re-assemble diverse elements

of knowledge to fit the particular needs of a given understanding or problem-solving situation” (Spiro & Jehng, 1990, p. 169). In order to comprehend online texts, online readers must employ purposeful as well as flexible choices of various media as they construct meaning from online texts, a process which requires flexibility in reassembling existing knowledge (Coiro & Dobler, 2007).

Methodology

Participants

132 undergraduate students aged 19 to 40 years were recruited from universities in Cambodia, Kenya, Korea, and Thailand. The voluntary nature of participation led to a nonrandomized sampling. Students were also not limited to any particular major. After they completed answering the survey questions, a scoring guideline was provided so that they could interpret their scores. This also served to raise their awareness of online reading processes as a preparation for the think-aloud procedure. Later, two students were randomly selected from each country to participate in a think-aloud task. The researchers explained the importance and advantages of their participation in the task, provided advice and suggestions for enhancing their awareness of the use of online reading strategies, and shared the study results with them.

Data Collection

Students were given the Online Survey of Reading Strategies (OSORS) (Anderson, 2003), which is an adapted form of the Survey of Reading Strategies (SORS) (Sheorey & Mokhtari, 2001), in order to identify online reading strategies they used. The SORS is designed to measure offline reading strategies in academic reading contexts, and has 30 items. It measures three categories of reading strategies: global, problem-solving, and support strategies. On the other hand, the OSORS, the adapted form of the SORS, is designed to measure metacognitive online reading strategies. It also contains the same three categories of reading strategies as the SORS does, but consists of 38 items instead of 30, each using a 5-point Likert scale for responses (See Appendix 1 for the three subsections of the OSORS). The point 5 means “always or almost always” and 1 means “never.” The survey was administered using Survey Monkey, an online survey tool, and included all 38 items plus eight background information questions (i.e., gender, age, major, years of learning English, reasons for learning English, importance of becoming proficient in English, overall English proficiency level, hours spent reading online per day, and areas of interest in reading online). The students received an email with the link to this survey.

After analyzing students’ answers, the top three strategies in each of the three categories were identified according to the four countries. Students from each country who indicated the top three strategies in each of the three categories the most (by checking “usually” or “always or almost always” for the use of those strategies in the survey) were randomly selected for a think-aloud task. Based on a number of factors, including their willingness, diversity in majors, availability of

time, and access to the Internet, two students from each country were purposefully selected. The eight students (six males and two females) were then asked to read an article about global warming from *National Geographic* (<http://environment.nationalgeographic.com/environment/global-warming/gw-overview.html>). The article had less than 900 words and was comprised of 20 paragraphs. It is also rated at the US grade level 10.1 by the Flesch-Kincaid leveling using the MS Word text difficulty feature. Since the students had studied English as a second language for about 10 years, the researchers thought that providing a text with a US high school level (i.e., 10.1 grade level) would be appropriate for them, even though they were university students.

Furthermore, the topic of global warming was chosen because the researchers thought students from different cultural backgrounds might be quite familiar with it, since they all expressed interest in local and world news. The researchers discussed ahead of time what kinds of questions should be asked and what should be observed from the students. A specific guideline for the think-aloud procedure was created by the researchers so that there would be some standardization of questions for each student in order to subsequently enhance validity and inter-rater reliability. Before the “formal” think-aloud interviews began, the researchers explained what the students were supposed to do and modeled the exercise using a text about recycling electronics that had a similar format to the actual think-aloud text. The students were then asked to talk about how they read the given text and what kinds of strategies they used to comprehend the text.

Since the researchers and students were in different countries, the communication was facilitated via Skype; “[software](#) that allows users to make [telephone calls over the Internet](#)” (“Skype,” 2012, para. 1). All researchers and students used Pamela for Skype (<http://www.pamela-systems.com>) to record Skype call conversations. During the think-aloud sessions, the researchers and the students used both English and their first language. Later the conversations were transcribed, and member checks were conducted in cases where there was a need to clarify specific issues in the transcripts.

Data Analysis

To answer the first research question, the researchers identified first the mean scores and standard deviations of the overall students and then divided the students by country and examined those scores and standard deviations for the 38 items. The top three strategies in general and in the three subsections (i.e., global strategies, problem-solving strategies, and support strategies) according to the four different countries were identified. Also, ANOVAs were applied to examine whether significant differences existed among the four countries on the three subsections of the OSORS. To answer the second research question, the recorded think-aloud conversations were analyzed qualitatively to determine how the students used the different online reading strategies. The most frequently used strategies in each subsection reported in each student’s survey questionnaire (i.e., the strategies marked as “usually,” which was point 4, and “always or almost always,” which was

point 5) and the strategies in each subsection actually used during the think-aloud task were compared. Then, the reasons why the students used or did not use the self-reported reading strategies during the think-aloud task were explained with examples. Comparing the students' reported use of strategies with their actual use would have great significance, in that it can make up for the limitations of simply using the self-reported survey data. In addition, listening to the reasons for using or not using the reported strategies in actual reading would provide explicit and in-depth explanations of what is going on in the students' minds, that is, their overall reading processes.

Results and Discussions

What metacognitive online reading strategies do students in different countries report using?

The first research question in this study was directed towards identifying the metacognitive online reading strategies used by the students in the four countries. According to the students' response to the OSORS, those in the four countries used the following global strategies the most:

#1. I have a purpose in mind when I read online.

#6. I take an overall view of the online text to see what it is about before reading it.

#14. When reading online, I decide what to read closely and what to ignore.

With regard to problem-solving strategies, the students used the following strategies most:

#13. I adjust my reading speed according to what I am reading online.

#16. When online text becomes difficult, I pay closer attention to what I am reading.

#28. When online text becomes difficult, I reread it to increase my understanding.

The following support strategies were used the most by all the students:

#15. I use reference materials (e.g., an online dictionary) to help me understand what I read online.

#21. I paraphrase (restate ideas in my own words) to better understand what I read online.

#25. I go back and forth in the online text to find relationships among ideas in it.

These findings, including the means and standard deviations, are summarized in Table 1 below.

Strategy Type	Strategy Number	Mean	Std. Deviation
Global	1	3.58	1.15
	6	3.70	1.10
	14	3.81	1.05
Problem-solving	13	3.48	1.06
	16	3.49	1.05
	28	3.55	1.04
Support	15	3.39	1.10
	21	3.28	1.23
	25	3.27	1.03

Table 1. Top three strategies used by all students

The strategies used the most by the students from the four countries and their mean scores and standard deviations are presented in Table 2. In the case of Cambodia, four top support strategies are identified since the mean scores for strategies number 21 and 38 were the same ($M=3.09$). Similarly, in the case of Thailand, four top global strategies are identified since the mean scores for strategies number 14 and 20 were equal ($M=3.48$). In the case of Kenya, support strategy numbers 12 and 21 topped the section with means of 3.97 and 3.91 respectively. Four strategies (#4, #15, #25, and #29) tied for third place, with each scoring a mean of 3.27, but the researchers did not include them in the table since it seemed to be too unwieldy to list all of them. In some cases, the strategies used the most in specific countries matched the top three strategies used by all students in general; for example, global strategies number 6 and 14 were used not only by Kenyan students but also by all the students in general. However, there were some top strategies unique to specific countries, for example, the problem-solving strategies number 11 and 31, which Korean students used, were not the ones that the all students in general used.

Strategy Type	Cambodia	M	SD	Kenya	M	SD	Korea	M	SD	Thailand	M	SD
Global	#1	3.73	1.10	#6	4.39	.97	#6	3.42	.90	#1	3.48	1.09
	#14	3.76	1.20	#14	4.36	.99	#14	3.64	.90	#6	3.58	1.09
	#20	3.70	1.13	#26	4.15	.87	#32	3.36	.82	#14	3.48	.91
										#20	3.48	1.15
Problem-solving	#13	3.73	.84	#28	3.70	1.16	#11	3.42	.83	#16	3.52	1.03
	#16	3.88	.86	#34	3.88	1.39	#13	3.67	.78	#22	3.58	.97
	#31	3.97	.98	#36	4.15	1.15	#31	3.42	.83	#28	3.45	.91
Support	#15	3.2	1.2	#12	3.9	1.36	#15	3.30	.98	#15	3.7	.9

	4	8		7						3	8
#21	3.0 9	1.0 1	#21	3.9 1	1.18	#25	3.18	.88	#21	3.5 5	1. 09
#25	3.2 7	1.0 1				#38	3.03	1.0 2	#25	3.3 3	.9 9
#38	3.0 9	1.2 6									

Table 2. Strategies used the most by the students in each country

The mean scores and standard deviations for the three subsections of the strategies that students in general used are shown in Table 3.

Strategy Type	N	Minimum	Maximum	Mean	Std. Deviation
Global	132	1.67	4.44	3.26	.61
Problem-solving	132	1.18	4.73	3.34	.68
Support	132	1.11	4.56	2.95	.69

Table 3. Mean Scores and Standard Deviations for the three subsections of the OSORS

The students used problem-solving strategies the most, global strategies the second most, and support strategies the least. The ANOVA results in Table 4 show that there is a significant difference among the four countries in the use of global strategies ($F=4.943, p<.003$) but not in problem-solving and support strategies, indicating that the students in the four countries varied in their use of global strategies.

Strategy Type	Analysis/Source	Sum of Squares	df	Mean Square	F	Sig.
Global	Between Groups	5.023	3	1.674	4.943	.003*
	Within Groups	43.356	128	.339		
	Total	48.378	131			
Problem-solving	Between Groups	1.360	3	.453	.987	.401
	Within Groups	58.750	128	.459		
	Total	60.109	131			
Support	Between Groups	1.360	3	.453	.954	.417
	Within Groups	60.801	128	.475		
	Total	62.160	131			

Table 4. ANOVA among the four countries for the three subsections of the OSORS * $p<.05$

However, the students' use of problem-solving strategies and support strategies did not vary much. The mean scores and standard deviations for the strategy use of the students in each country are shown in Table 5. Also, graphs of mean scores among the students in the four countries are shown in Figure 1.

Strategy Type	Country	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Global	Cambodia	33	3.32	.64	.11	1.72	4.22
	Kenya	33	3.53	.61	.11	2.06	4.44
	Korea	33	2.99	.39	.08	2.06	4.00
	Thailand	33	3.21	.65	.11	1.67	4.39
	Total	132	3.26	.61	.053	1.67	4.44
Problem-solving	Cambodia	33	3.43	.57	.10	2.18	4.55
	Kenya	33	3.45	.86	.15	1.18	4.64
	Korea	33	3.21	.53	.09	1.64	4.36
	Thailand	33	3.27	.70	.12	1.91	4.73
	Total	132	3.34	.68	.06	1.18	4.73
Support	Cambodia	33	2.99	.76	.13	1.67	4.44
	Kenya	33	3.01	.77	.13	1.11	4.56
	Korea	33	2.77	.54	.09	1.56	3.67
	Thailand	33	3.01	.67	.12	1.89	4.44
	Total	132	2.95	.69	.060	1.11	4.56

Table 5. Mean Scores and Standard Deviations among the four countries for the three subsections of the OSORS

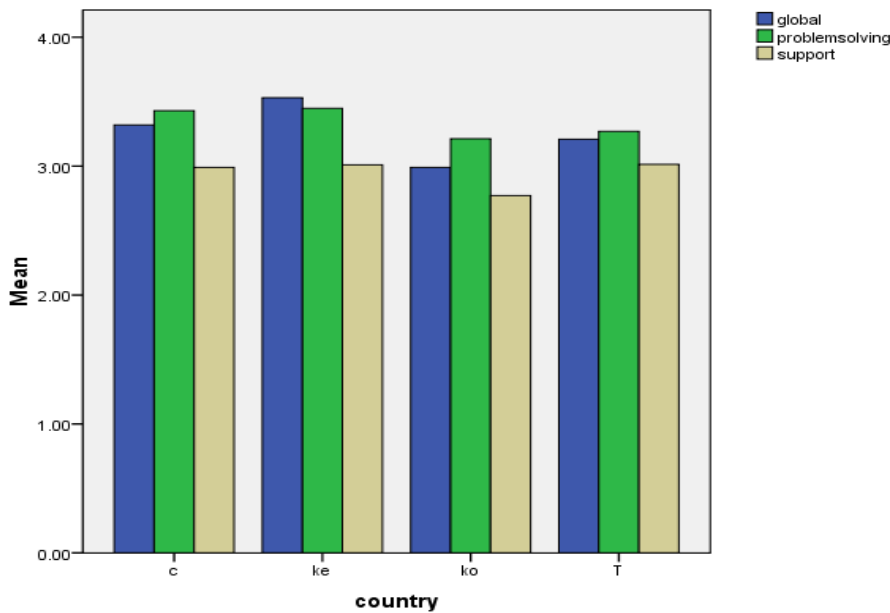


Figure 1. Bar graphs of the mean scores among the four countries. *Note: C: Cambodia, Ke: Kenya, Ko: Korea, T: Thailand

Even though the mean scores of the three subsections used in each country varied, overall problem-solving strategies were used the most, global strategies the second most, and support strategies the least. However, the strategy use of Kenyan students was unique. They used global strategies the most (M=3.53, SD=.61), problem-solving strategies the second most (M=3.45, SD=.86), and support

strategies the least ($M=3.01$, $SD=.77$). No clear evidence was found in the literature, but the researchers assumed that the reason for this might be due to different English-teaching methods in Asia from in Africa. Whereas Asian students are taught to solve all comprehension difficulties immediately before moving on to the next part of a text, African counterparts are taught to monitor and manage their overall reading processes rather than dealing with comprehension difficulties. Accordingly, Cambodian, Korean, and Thai students in this study might have used problem-solving strategies more, which are applied when “[working] directly with texts” (Mokhtari & Sheorey, 2002, p. 4) and when encountering comprehension problems (Monos, 2005). However, Kenyan students might have used global strategies more, which are “intentional, carefully planned techniques” (Mokhtari & Sheorey, 2002, p. 4) and applied when monitoring one’s own reading (Monos, 2005).

How do students in different countries use metacognitive online reading strategies?

The background information on the eight students who were selected for the think-aloud task is shown in Table 6.

Student	Gender	Major	Age	Self-rated overall English proficiency level
C1	Male	Computer Science	19	Fair
C2	Female	English & Medicine	19	Good
Ke1	Male	Mathematics	22	Good
Ke2	Male	Medicine	21	Excellent
Ko1	Male	Law	27	Good
Ko2	Female	Business	22	Good
T1	Male	Political Science	22	Poor
T2	Male	Economics	24	Excellent

Table 6. Background of students who participated in the think-aloud task

Strategies used most by students during the think-aloud task

Among the 38 strategies in the OSORS, global strategy #14 (*When reading online, I decide what to read closely and what to ignore*) was the only one that was identified by the researchers as being used frequently by all eight of the students. However, only seven of them used this strategy during the think-aloud task. Global strategy #26 (*I check my understanding when I come across new information*) came second, with seven out of the eight students identified as using it frequently. Yet only five students used this strategy during the think-aloud task.

There were at least three other global strategies that were identified by the researchers (from the survey results) as being frequently used by six of the eight students: strategy #1 (*I have a purpose in mind when I read online*), which was observed to be used by four of the students; strategy #6 (*I take an overall view of the online text to see what it is about before I read it*), which four out of six students were observed to use; and strategy #32 (*I scan the online text to get a basic idea of*

whether it will serve my purposes before choosing to read it), which two out of six students were observed to use.

Of the ten problem-solving strategies identified by the researchers as being used frequently by the eight students, strategy #13 (*I adjust my reading speed according to what I am reading online*) was observed to be used by six of the students; strategy #28 (*When an online text becomes difficult, I reread it to increase my understanding*) was observed to be used by five of the students; and strategy #22 (*I try to picture or visualize information to help remember what I read online*) was observed to be used by three of the students.

Nine support strategies were identified by the researchers as frequently used by the eight students. Two of them were selected by six students as being used frequently: strategy #29 (*I ask myself questions I'd like to have answered in the online text*), which was observed to be used by four of the students; and strategy #25 (*I go back and forth in the online text to find relationships among ideas in it*), which was observed to be used by three of the eight students.

Strategies used least by students during the think-aloud task

There were five strategies that were not observed in the think-aloud task, despite being identified by the researchers as being frequently used by the eight students in the survey. These were global strategy #2 (*I participate in live chat with other learners of English*), #3 (*I participate in live chat with native speakers of English*), and #17 (*I read pages on the Internet for academic purposes*), problem-solving strategy #9 (*I read slowly and carefully to make sure I understand what I am reading online*), and support strategy #21 (*I paraphrase [restate ideas in my own words] to better understand what I read online*). The inability to observe these five strategies may be due to the fact that the selected website for the think-aloud procedure did not lend itself to chatting with native speakers or other learners on the Internet. It was also not possible to observe slow reading because the students were more likely to skim through the given text and skip less important parts as they were reading it for pleasure. Similarly, paraphrasing of ideas was not observed. Since the students read the text for fun, but not for academic purposes (e.g. taking a test and/or getting a grade), they did not think it was necessary to restate difficult parts in their own words.

Two other strategies that were identified by researchers as frequently used by the students based on the survey were observed among only two of the students: global strategy #8 (*I think about whether the content of the online text fits my reading purpose*) and support strategy #12 (*I print out a hard copy of the online text then underline or circle information to help me remember it*). Given the fact that the think-aloud protocol was conducted online, the students may not have had the time or even a printer next to them and thus were not able to print out a hard copy of a web page they were reading. Regarding strategy #8, the content and purpose were already determined by the researchers.

Two Cambodian students' actual strategy use in the think-aloud task

Reading the online English text about global warming, C1 used approximately half of the strategies he reported to almost always and usually use in his online survey response. Four strategies that he frequently used were problem-solving strategy #16 (paying closer attention to what he was reading when the text became difficult) and #31 (guessing meaning of unknown words/phrases), and supporting strategy #15 (using online reference materials) and #29 (asking himself questions and seeking answers from the text). He read the text in a linear fashion from the top to the bottom. He guessed meanings of some difficult phrases while reading, hoping that the subsequent part of the text would clarify. However, he would also ignore them if his guessing did not work. "I am not sure with this phrase 'set into motion?' but I want to read on because I think the later part will tell." In the middle of the text he decided to use Webster's online dictionary to check for the meaning of the verb "enhance." This was a tactical move since the verb was the main verb in the sentence. At one point, he critiqued the text for not giving enough information. "The text says the levels of greenhouse gases have been fairly constant for the past few thousand years. But why? The text doesn't seem to provide enough information." As he read he kept this question in mind until he got the answer in the third paragraph from where he asked. The online dictionary did not always help him. He checked the word "mercury," but was overwhelmed with so many different meanings, and no one definition seemed to perfectly match the context.

C2 employed approximately 60% of strategies reported to be frequently used in her online survey response. She started reading at the title of the text and went all the way to the bottom. However, C2 tended to reread many paragraphs multiple times. She questioned the accuracy of information in the text, as it was not consistent with what she had learned at school. Oftentimes, she complained about the writing style (e.g., long sentences and unnecessarily difficult words). When she hit a difficult part, she would translate it into her L1. At the beginning of the text, she just guessed or skipped difficult words and phrases. As she reached the middle of the text, she became uncomfortable with the difficult words and began to use her cell phone to check for their meanings. She expressed that the reading was getting boring for her. She wanted to jump to the last paragraph of the text and read backwards paragraph by paragraph. She also tended to read aloud the difficult parts because reading aloud slowed her down and helped her concentrate. While reading, C2 also wrote down difficult words in her notebook and would go back to them later if she wanted to learn the words. Both C1 and C2 used problem-solving strategies the most, but C2 depended more heavily on them. She employed almost all the problem-solving strategies reported to be almost always and usually used in her online survey response. C2 eventually expressed that the topic was not boring, but the complex linguistic structures of the text discouraged her from reading.

Both readers reported their reading skill as good. But C1 read the text much faster, while C2 reread some paragraphs up to five times. C1 did not seem to have many difficulties with the text, as he was familiar with this field and thus used fewer

strategies. C2 was struggling with the text and spent her time employing different strategies, especially problem-solving strategies.

Two Kenyan students' actual strategy use in the think-aloud task

Ke1 used 8 strategies out of 15 he had reported, while Ke2 used 11 out of 14. Ke1 had said that he was out to discover for himself what global warming was all about, as he had stated that the previous knowledge he had was from what he had heard from other people. He took an overall view of the site before reading the presented text, and then reported that he was trying to open the video link on global warming and wanted to watch a brief audiovisual presentation of the topic. Unfortunately, his Internet connection was not fast enough, so he could not do this. He said that he liked to start by looking at a video because it gave him a good, quick overview of the subject. He stayed with the text in a more linear fashion, going from the top of the page downwards and opening the links that were available in new windows, in line with global strategy #26 that involves checking understanding of new information.

Some of the strategies which the student did not use, despite having reported them in the survey, included problem-solving strategy #36; he did not look for sites that addressed different sides of the issue. Despite reporting that he used problem-solving strategy #9, which has to do with slow and careful reading, the student seemed to do the exact opposite, as he read through the website quickly. He did not print anything, so he did not use support strategy #12, which required that he print what he wanted to read. He did not take notes either, as he had indicated in the reported data.

Ke2 was a more critical online reader than Ke1; unlike Ke1, who approached the text with a desire to learn more about global warming, Ke2 was quick to state that he did not believe global warming was real, that it was the creation of a few individuals. He added that not too long ago he had read a scientific article which indicated that 90% of the CO₂ emissions into the atmosphere were from the sea, and that humans could do very little to significantly affect the overall levels of carbon dioxide in the universe.

Ke2 read with a purpose in mind, which was in line with global strategy #1, and was looking for information on the website which would disprove the theory of global warming. It was not clear why he did not seek other sites that would give contradictory information, in line with his reported use of strategies that involve looking at sites that cover both sides of an issue. The student used his previous knowledge as well as knowledge found on the website to evaluate the theme. He read carefully to make sure he understood what he was reading, but he did not employ paraphrasing strategies, which he employed only when reading for an academic purpose.

Two Korean students' actual strategy use in the think-aloud task

When Ko1 got the global warming text, he first checked the text length and started to read the first and last paragraph quickly. He then read from the second paragraph, but skipped several paragraphs that* he did not think important. When reached the

very last paragraph, he reread it to find the conclusion.

Of the seven global strategies he reported in the survey, he used four. He took an overall view of the text to see what it was about before reading. Also, he decided what to read closely and what to ignore while reading. He constantly checked his understanding when encountering new information. He mentioned that bold text or large font size helped him understand the text better.

Of the four problem-solving strategies reported, Ko1 used three. He slowed down or read twice when sentences seemed to be important or unclear, but speeded up when sentences discussed what he already knew. He used context to guess the meaning of unknown words. He mentioned that he usually tried to get back on track when he lost concentration.

Of the four reported support strategies, he used only one. He thought about the content in Korean after reading each paragraph. He said translating or transferring from English to Korean helped him. He usually liked to print out a copy of an online text. However, since the given text was not difficult and he could not access a printer during the think-aloud task, he did not print out a copy. In addition, he did not use an online dictionary because he could easily guess the meaning of unfamiliar words. Moreover, he could easily find relationships among ideas in the text such as cause and effect of global warming without going back and forth in the text.

Overall, Ko1's actual use of strategies matched his reported use of strategies the most with problem-solving, the second most with global, and the least with support strategies. The reasons he did not actually use all the reported strategies was because 1) he already had some background knowledge on global warming, 2) the text was relatively easy, and 3) the purpose of reading the text was to know more about global warming but not to learn a new concept or write an academic paper.

Like Ko1, Ko2 also checked the length of the text before reading it. One big difference between Ko1 and Ko2 was that Ko2 always put her right hand on the mouse and moved the mouse cursor on the screen while reading the text; whereas, Ko1 never used the mouse and simply read the text by moving his eyes.

Of the nine global strategies Ko2 reported, she used six. She reviewed the text length and took an overall view to see what it was about. Also, she said she focused more on words written in bold, which seemed to be more important. Unlike Ko1, Ko2 checked what kinds of visuals were on the page and whether those visuals would be relevant to the text. In addition, she read the text for fun but not for academic purposes, because she was not asked to write a report on it.

Of the seven problem-solving strategies, Ko2 used five. She adjusted her reading speed and read certain words or sentences again when confused. One thing unique about Ko2 was that she tended to say what she was thinking out loud.

Of the five reported support strategies, Ko2 used two. She read aloud to enhance her understanding and went back and forth to find relationships among ideas. For example, she reread several sentences to determine sequence. She finally

concluded that “global gas” would come first, “global effect” next, and “global warming” last. For unfamiliar words, she did not use a dictionary because she thought the text was not difficult. Like Ko1, since there was no printer, Ko2 could not print it out.

Overall, Ko2’s actual use of strategies matched her reported use of strategies the most with problem-solving, the second most with global, and the least with support strategies. The reason she did not actually use all the reported strategies was because 1) the text was easy to read, and 2) she read the text for pleasure but not for writing an academic paper.

Two Thai students’ actual strategy use in the think-aloud task

During the think-aloud task, T1 used 15 out of 25 strategies he reported using on the survey. Although the topic was not of particular interest to him, he already had prior knowledge about the causes and effects of global warming through his initial exposure at school. According to him, this familiarity with the topic greatly facilitated his reading comprehension, particularly when he encountered certain problems related to the complicated concepts presented in the text. Some of the strategies he often used included global strategy #23 (using bold face and italics to identify key information), and supporting strategies #15 (using reference materials), #25 (going back and forth in the text to find relationships among ideas), and #37 (translation of the text from English into Thai). Reporting that his English proficiency is poor, he experienced difficulty with technical terms and other difficult words found in the text. In an attempt to decode word meanings, he consulted an English–Thai online dictionary, which was found to be overwhelming and demotivating since the text was full of unfamiliar words. “The ideas in the text are not that difficult, but I saw a lot of unknown words ... that made me want to skip reading.” Surprisingly, he expressed that pictures on the page did not help foster his understanding much, since most of the times the ideas that the page presented were much more complicated than what pictures can convey. Faced with a dilemma, he purposefully selected a few topics that resonated with his interests to learn more about global warming in conjunction with his prior knowledge. Furthermore, another strategy he used to acquire a better understanding of the topic was to read an online text in Thai about global warming when the English text did not make sense to him. Even though he reported that he sometimes printed out a hard copy of the online text, he chose not to do so during this think-aloud task, as he realized that it was not intended for an academic purpose. His choice of strategy use was determined largely by the purpose of reading as well as the complexity of the reading text.

Unlike the case of T1, the English proficiency of T2 was found to be relatively excellent. He also reported a clear understanding of the topic previously learned from class. When undertaking the think-aloud task, most of the strategies he reported using frequently on the survey response were employed. Also, one marked difference between these two participants’ use of strategy is that T2 appeared to feel much more familiar with a wide range of metacognitive strategies that he

selected to utilize while reading online. As a strategy, he realized the time constraint of the reading task, which obliged him to decide what to read closely and what to ignore. In so doing, he used typographical features such as bold face to identify key information that was deemed necessary. To learn more about the topic, he asked himself questions he liked to have answered in the online text. For instance, the questions regarding the current situation of global warming were established beforehand. The questions provided him with a clear intention when navigating the webpage. Similar to T1's comment, T2 also pointed out at the end of the think-aloud session that the purpose he had in mind when he read online would not only determine what strategies he would use, but also the frequency of strategy use during any reading task. While reading for pleasure typically requires basic strategies, reading for academic purposes, for instance, calls for more sophisticated types of strategies which inevitably force readers to put more time and effort into the task.

Summary of the eight students' actual strategy use in the think-aloud task

Through the think-aloud procedures, it was found that approximately 61% of the strategies reported by the eight students in the survey questionnaire were actually used by them, as shown in Table 7.

Student	Global	Problem-Solving	Support	Overall
C1	3/10 (=30%)	5/7(=71%)	2/4 (=50%)	10/21 (=48%)
C2	3/9 (=33%)	6/7 (=86%)	5/8 (=63%)	14/24 (=58%)
Overall	6/19 (=32%)	11/14 (=79%)	7/12 (57%)	24/45 (=53%)
Ke1	5/7 (=71%)	2/4 (=50%)	1/4 (=25%)	8/15 (=53%)
Ke2	7/7 (=100%)	2/4 (=50%)	2/3 (=67%)	11/14 (=79%)
Overall	12/14 (=86%)	4/8 (=50%)	3/7 (=46%)	19/29 (=66%)
Ko1	4/7 (=57%)	3/4 (=75%)	1/4 (=25%)	8/15 (=53%)
Ko2	6/9 (=67%)	5/7 (=71%)	2/5 (=40%)	13/21 (=62%)
Overall	10/16 (=62%)	8/11 (=73%)	3/9 (=33%)	21/36 (=58%)
T1	7/11 (=64%)	5/8 (=63%)	3/6 (=50%)	15/25 (=60%)
T2	7/9 (=78%)	3/4 (=75%)	3/4 (=75%)	13/17 (=76%)
Overall	14/20 (=71%)	8/12 (=69%)	6/10 (=63%)	28/42 (=67%)
Total	42/69 (=61%)	31/45 (=69%)	19/38 (=50%)	92/152(=61%)

Table 7. Percentages of actual strategies used by students in the *think-aloud*

The think-aloud results of Kenya and Korea matched with the survey results. However, the think-aloud results of Cambodia and Thailand revealed a slight difference from the survey results. More specifically, Cambodian students reported that they used problem-solving strategies the most, global strategies the second most, and support strategies the least in the survey, while support strategies were observed to be use more than global strategies in the think-aloud task. Also, students in general in Thailand reported that they used problem-solving strategies the most, global strategies the second most, and support strategies the least, whereas the two Thai students used global strategies the most, problem-solving strategies the second most, and support strategies the least in the think-aloud task.

It is important to note, however, that the difference between the average percentages of actual use of global strategies and problem-solving strategies during the think-aloud task for the two Thai students was very small (71% and 69% respectively), and almost unreliable. For Kenya, the think-aloud results matched with the survey results, and they revealed that global strategies were used the most, problem-solving strategies the second most, and support strategies the least. For Korea, the think-aloud results also matched with the survey results, and revealed that problem-solving strategies were used the most, global strategies the second most, and support strategies the least.

Based on the survey results, Cambodian, Korean and Thai students used problem-solving strategies the most. This was confirmed by the think-aloud results of Cambodian and Korean students, but not for Thai students. Also, both the survey and think-aloud results confirmed that the most frequently used strategy by the Kenyan students was global strategies.

The least frequently used strategies based on the survey were support strategies. This result was confirmed by the think-aloud results of Kenya, Korea, and Thailand. However, for Cambodia the least frequently used strategies in the think-aloud task were global strategies. The data collected from this study may not be adequate to explain why the think-aloud results of Cambodia differed with the survey results regarding the support strategies being the least used.

In conclusion, there were many similarities among the eight students in their actual use of strategies in the think-aloud tasks and their self-reported use of strategies in the survey. However, no major discrepancies were found between the students' actual use and reported use of strategies.

Limitations

The data from the online survey were self-reported by the participants. The problem with self-reported data is that the participants may not report what they actually do in reading, and the reported strategies are seen as constant and noncontingent. In actual reading, the participants may not use all the strategies they report in all cases of reading. What they choose to use depends on what they read and the context of the reading. The data from the online survey thus should be cautiously interpreted.

Moreover, certain strategies such as printing out the online text are not doable in the think-aloud session. Since the think-aloud session was carried out online, not onsite, and the researcher did not have the visual of what the participant did, some strategies were not possible to be observed.

The data from the think-aloud session were meant to be triangulated with the data from the online survey. However, the think-aloud data were limited to certain strategies from among the 38 strategies in the online survey; therefore, the think-aloud data do not coincide with all parts of the survey data. Due to the relatively small number of participants for the think-aloud session, the triangulation and generalizability values of the data were limited.

Implications

The findings in this study have implications for teaching and research. Some students articulated that they were not aware of some strategies that would enhance their reading comprehension. Therefore, through explicit instruction, teachers should encourage students to utilize more metacognitive strategies while reading online, including using prior knowledge, guessing word meaning from context, skimming for main ideas, scanning for information, summarizing, and self-questioning and prediction. To raise students' awareness of metacognitive online reading strategies, teachers should focus not only on the number of strategies students can use but also the amount of time the strategies are used.

Since it was revealed in the findings that students, regardless of their language proficiency, used their background knowledge frequently when reading online, teachers should also pay special attention to selecting texts that address students' interests and their English proficiency. Teachers can gradually proceed from easy texts to more challenging ones whose topics are of interests to students, and incorporate a student-centered approach and collaborative learning approach into instruction. In the same vein, teachers should begin with some metacognitive reading strategies that are easy for students to implement, in order to inspire their confidence and build a greater sense of achievement.

Furthermore, the findings demonstrated that the students adjusted their strategies to the type of text as well as to the purpose of their reading. For instance, they used contextual clues to decipher the meaning of unfamiliar words, and identified key information by means of such typographical features as boldface and italics. Thus, teaching students a repertoire of metacognitive reading strategies would facilitate their adjustment to the different types of texts they are reading.

Finally, the study findings suggest some important areas for further research. In an attempt to extend the scope of the current study, researchers might seek to examine whether there are any similarities and discrepancies between the participants' use of strategies in the online and offline reading environments. Moreover, it would be interesting to explore the manner in which readers use strategies when they read for different purposes, such as academic and nonacademic purposes. These empirical data would yield a better understanding of how the same readers implement metacognitive reading strategies in two contexts, in terms of their choices and frequency of strategy use.

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Appendix 1

Three Subsections of the OSORS

Global Reading Strategies

1. I have a purpose in mind when I read online.
2. I participate in live chat with other learners of English.
3. I participate in live chat with native speakers of English.
5. I think about what I know to help me understand what I read on-line.
6. I take an overall view of the on-line text to see what it is about before reading it.
8. I think about whether the content of the online text fits my reading purposes before choosing to read it.
10. I review the online text first by noting its characteristics like length and organization.
14. When reading online, I decide what to read closely and what to ignore.
17. I read pages on the Internet for academic purposes.
18. I use tables, figures, and pictures in the online text to increase my understanding.
20. I use contextual clues to help me better understand what I am reading online.
23. I use typographical features like boldface and italics to identify key information.
24. I critically analyze and evaluate the information presented in the online text.
26. I check my understanding when I come across new information.
27. I try to guess what the content of the online text is about when I read.
30. I check to see if my guesses about the online text are right or wrong.
32. I scan the online text to get a basic idea of whether it will serve my purposes before choosing to read it.
33. I read pages on the Internet for fun.

Problem-solving Strategies

9. I read slowly and carefully to make sure I understand what I am reading online.
11. I try to get back on track when I lose concentration.
13. I adjust my reading speed according to what I am reading online.
16. When an online text becomes difficult, I pay closer attention to what I am reading.
19. I stop from time to time and think about what I am reading online.
22. I try to picture or visualize information to help remember what I read online.
28. When an online text becomes difficult, I reread it to increase my understanding.
31. When I read online, I guess the meaning of unknown words or phrases.
34. I critically evaluate the online text before choosing to use information I read online.
35. I can distinguish between fact and opinion in online texts.
36. When reading online, I look for sites that cover both sides of an issue.

Support Reading Strategies

- 4. I take notes while reading online to help me understand what I read.
- 7. When online text becomes difficult, I read aloud to help me understand what I read.
- 12. I print out a hard copy of the online text then underline or circle information to help me remember it.
- 15. I use reference materials (e.g., an online dictionary) to help me understand what I read online.
- 21. I paraphrase (restate ideas in my own words) to better understand what I read online.
- 25. I go back and forth in the online text to find relationships among ideas in it.
- 29. I ask myself questions I like to have answered in the online text.
- 37. When reading online, I translate from English into my native language.
- 38. When reading online, I think about information in both English and my mother tongue.

Language policy and planning for Latinos in Indiana: A case study

Colleen E. Chesnut

Abstract

In Indiana and many other areas of the Midwest, Latino populations have recently experienced quite rapid growth. This study will focus on how Indiana's state and local institutions, including government agencies, schools, and community organizations have responded to expansion of Latino communities, examining evidence of language policy and planning in these responses. An epistemological framework outlining the parameters of language policy and planning will be provided, as well as a brief historical narrative to set the context for Latinos settling in Indiana. Demographic data and document analysis reveal both the salience of this research for a growing Latino population and the current availability of resources and information about policy around language planning for this group. Findings illustrate that English remains the primary lingua franca for Indiana, though some evidence indicates scattered efforts to reach out to Latino citizens in Spanish through a variety of means. This research contributes to a growing body of literature on experiences of Latinos in the Midwest and policymakers' efforts to better serve the needs of these growing communities.

Introduction

With ever-increasing frequency across the largely rural and somewhat sparsely populated state of Indiana, Latino families are making their homes. In both small and large communities formerly accustomed to the homogeneity of a white English-speaking majority, native Spanish-speaking men, women, and children are living, working, and attending schools. This presents a relatively new challenge to state and local governments, school districts, employers, and community organizations in terms of language planning and policy implementation. This case study will explore the language policy context of Indiana as it affects the Latino population. For the purposes of this study, the term "Latinos" will be employed to mean persons of descent or origin from Latin America, including Mexico, and the Spanish-speaking Caribbean, Central American, and South American nations.

To begin with, the study will be framed by theoretical definitions of language planning and language policy as described by Cooper (1989). Within this framework, the history of Latinos migrating to and settling in Indiana will be discussed. Following this will be an exploration of the current state of planning and implementation of language policies, both overt and covert, at the state and local levels. Finally, the implications of these policies and practices for native Spanish-

speaking Latinos in Indiana will be outlined. Primarily a review of existing research and data, the main purpose of this study is to act as a guide for future research into effective language planning and policy practices for those interested in serving the needs of Indiana's Latino population.

Epistemological Framework

In order to create a framework for this investigation, definitions designated by Cooper (1989) will be employed for some of the terms and ideas around language planning and policy to be used consistently throughout. Since this is an examination of language planning within a state, rather than at a national level, the definitions used will be rather broad and applicable to a variety of activities. Thorburn states that “[language planning] occurs when one tries to apply the amalgamated knowledge of language to change the language behavior of a group of people” (quoted in Cooper, 1989, p. 30). In this case, the target group of people is the Latino population of Indiana and those who seek to “apply the amalgamated knowledge of language” may be government officials, educators, community organizers, members of the media, employers, or any other number of people who make decisions about language use. Their “knowledge” may emanate from a vast array of sources and will likely contradict the knowledge and beliefs of others seeking to affect language use. This broad definition of language planning will allow for an investigation of the many different ways in which this concept can manifest at the state and local levels to influence the Latino community.

From this and other basic definitions of language planning, Cooper (1989) identifies three branches of the field: corpus planning, acquisition planning, and status planning. This study will focus specifically on acquisition planning and status planning, as they are likely more salient to Latinos coming to Indiana with an already well-established and recognized native language. Cooper (1989) defines status planning as the decisions and actions that will influence the functionality of a language in relation to other languages. The two languages juxtaposed in this case are, of course, Spanish and English. To illustrate with a basic example, status planning would be involved when a local business decides to provide information to customers in both English and Spanish. By providing the information in Spanish (the minority language) as well as English (the majority language), this business would potentially be changing the status of Spanish within the community, as they affirm that Spanish is also a legitimate form of communication within their business.

On the other hand, acquisition planning is defined as the decisions and actions that will influence the number of users of a language (Cooper, 1989). Again, the focus will be on Spanish and English acquisition, both for Latinos in Indiana and for non-Latinos who live alongside them in their communities. Acquisition planning often manifests in school settings, where classroom teachers and ESL instructors work together to plan for ways to help native Spanish-speaking students learn English. Narrowing the frame of language planning to focus on status planning and acquisition planning, specifically, will be useful for comparisons of communities and practices.

In addition to defining language planning and the specific aspects of the concept to be explored here, another term defined in Cooper's text, language policy, will be utilized frequently. Cooper (1989) repeatedly refers to language policies as proposed solutions to "language problems," but this designation seems somewhat troubling in the context of the Latino population, inferring that Spanish speakers' native language is a deficiency rather than a resource. This research will give preference to Prator's definition of language policies as "decisions concerning the teaching and use of language and their careful formulation by those empowered to do so, for the guidance of others" (quoted by Cooper, 1989, 31). This definition classifies language policies as "decisions" rather than solutions to perceived problems, suggesting that all language differences may not necessarily be problematic. Additionally, language policies may be official, found written into legal documents, or they may be more covert, emerging from a set of common practices to become standard procedures. Using this definition and remaining mindful that language policies may present as overt or covert, the following case study will explore language policies that govern the use of both English and Spanish in a variety of contexts and from a historical perspective within Indiana's communities and institutions.

Research Questions

By delving into the available research and data surrounding Latinos' experiences with language planning and policies in Indiana, this research will address several questions. The primary question determining the course of this case study is how do language planning, policies, and practices in Indiana affect native Spanish-speaking Latinos? Stemming from this are several secondary questions whose answers will help to focus the answers to the primary question. These secondary questions concern the historical context of Latino immigrants to Indiana and how their situation has evolved over time: which people, agencies, or organizations are responsible for planning and implementation of language policies affecting Latinos in Indiana, and what kinds of language policies, both overt and covert, exist? In order to address these questions, the experiences of Latinos in Indiana will be examined in historical and present-day contexts, using secondary research as well as existing demographic data. Subsequently, this research will focus on other actors playing roles in language planning and policy for Latinos, including what kinds of policies exist and in what forms.

History of Latinos in Indiana

Early Experiences of Latinos in the "Region": 1919-1970

Due to its location in the heart of the Midwest, Latino immigration to Indiana has occurred later and in distinct patterns from the migration of Latinos in other states situated closer to the US's southern border. While a significant amount of research exists on the early experiences of Latinos in the heavily industrialized northwest region of the state, there is little documentation on the early presence of Latinos in the central, southern, and more rural parts of the state. The first Latinos to arrive in significant numbers in Indiana were of Mexican origin, though many of them may have previously been living in the southwestern US for a number of years. They

came beginning in 1919 and throughout the early 1920s to work for US Steel in Gary and Inland Steel in East Chicago, initially serving as strikebreakers during the Great Steel Strike of 1919. By 1928, workers of Mexican descent comprised 9% of the workforce for US Steel. At first, men came to work in the steel mills, leaving their families behind either in the Southwest or in Mexico. However, many wives and children eventually joined the men, and communities of Mexican-Americans began to emerge and thrive, establishing businesses and community organizations (Escobar, 1987; Garcia & Cal, 1987; Lane, 1987). As the Latino community in this area of northwest Indiana, commonly known as “the Region,” grew in numbers and strength, issues of language and cultural differences became more salient, especially for the Latinos living and working in predominantly white and English speaking environments.

Several of the community organizations founded in the early years of Latinos’ migration to the Region concerned themselves, among other things, with issues of language planning. These groups were often termed *mutualista*, or mutual aid organizations, and by 1929 there were 11 distinct Mexican mutualista organizations in the Region (Rosales & Simon, 1987). Los Obreros was one of the most prominent of such groups, founded in 1925 as an organization to promote Catholicism, celebration of the Mexican community, patriotism (loyalty to both Mexico and the US), and assimilation to *some* US values, such as the importance of hard work (Garcia & Cal, 1987). Although members of Los Obreros were accused of being elitist, as many of them were more educated and fluent in English than some of the more recent Mexican-American immigrants to the area, they made efforts to help the community members maintain their use of Spanish. They published a free weekly newspaper called *El Amigo del Hogar*, printed in Spanish, with columns on local news, household advice and other items of interest to the Spanish-speaking community. This is the earliest evidence of Latinos in Indiana attempting to maintain their cultural identities, including native language, through mutual aid groups that supported the distinct needs of Mexican-Americans.

Unfortunately, with the stock market crash of 1929 and the following Great Depression, Mexican-American steel workers in the Region, along with many others, lost their jobs. During this era, the Mexican-American communities in this area of the state shrank, as many men and their families left to find work elsewhere or returned to Mexico (Escobar, 1987). As the population shifted, the mutualista organizations, including Los Obreros, also faded away (Garcia & Cal, 1987). However, while the communities no longer thrived as they had during the early 1920s, significant enough portions of the Mexican-American population remained in the Region so that their communities did not vanish entirely.

While the Mexican-American community in the Region may have diminished somewhat during the Depression, World War II and its end brought new vitality and change. What was previously a fairly homogenous population composed of Mexican immigrants began to incorporate another group of native Spanish-speakers, Puerto Rican immigrants. Like the Mexicans before them, Puerto Ricans first came to Indiana during the late 1940s as contract labor for US Steel, to fill the labor shortage

that occurred as a result of World War II (Maldonado, 1987). With the migration of a new group of Latinos came some competition between community groups for Mexican and Puerto Rican immigrants in terms of political clout. Mexican-Americans in the Region began to organize political clubs starting in 1938 to encourage political participation by members of their community. As a result of the increased migration of Puerto Ricans during the later 1940s and early 1950s, competing community and political organizations emerged, even though they shared many of the same concerns for their constituencies (Allsup, 1987). There were several attempts at unifying these organizations over the years that followed, the most successful of which became the Concerned Latinos Organization (CLO), which was active during the early 1970s in community empowerment of the Region's Latinos, pursuing concerns of housing, employment, and education. For the most part, the CLO and other Latino political organizations in the Region that preceded it did not become overtly concerned with language planning and policy, focusing rather on increasing the political power of the Latino community through heightened political participation.

Moving Beyond the Region

In rural, southern, and central parts of Indiana that lie outside of the urban industrial areas of Gary and East Chicago, immigration of Latinos has been less well-documented and investigated, due to the fact that many Latinos living in these areas arrived as migrant workers. As such, they often moved either within or to and from Indiana quite frequently without establishing permanent homes in the towns, cities, and rural locations where they came to work. Thus they were not normally included in US census data or other statistical reports (Aponte, 2001). By the 1970s and 1980s, Latino communities began to develop in areas of the state outside of the Region, including South Bend, Fort Wayne, and Indianapolis, as evidenced by the emergence of Latino community organizations during this era. However, these groups tended to be more scattered, and scant research on their activities exists, especially concerning language planning and policy. The statewide Latino population explosion has really occurred during the last two decades, and these more recent data will be examined in the following section.

Latino Presence in Indiana—1990-present

Beginning in the early 1990s, the Latino population in Indiana started a trend of rapid expansion that continues today. Much like the early immigrants to the northwest region of the state, the vast majority of Indiana's Latinos are of Mexican origin, and it is estimated that many of them migrate from other parts of the US (i.e., the South or Southwest) rather than directly from their countries of origin (Levinson, Everitt, & Johnson, 2007). The statewide growth in the Latino population as a whole is illustrated in the following table, with data from the US Census Bureau (Chapa, Saenz, Rochin, & Diaz McConnell, 2004; US Census Bureau, 2010a):

	1990 Census	2000 Census	2010 Census
Total Population	5,544,156	6,080,485	6,483,802
Latino Population	98,789	214,536	389,707

Table 1: Indiana Population Totals and Latino Population Totals

While the total population of Indiana experienced a 9.7% rate of growth between the 1990 and 2000 censuses, the Latino portion of Indiana's population grew by 117%. This expansion continues, as the Latino population increased by 45% between 2000 and 2010, compared with only a 6% increase for the total population. The growth has occurred in nearly all areas of the state, with the largest growth patterns concentrated in urban areas, such as Fort Wayne and Indianapolis, and also in the northwest region. Notable are Marion County, home to Indianapolis and outlying suburbs, Tippecanoe County, home of Lafayette and Purdue University, and Allen County, home of Fort Wayne, all three of which lie outside of the Region and which saw huge increases in their Latino populations within the period between 1990 and 2000 (STATS Indiana, 2009). Marion County, in particular, continues to experience the most rapid increase in Latino population of any county in the state, with the number of Latinos nearly quadrupling from 8,450 to 33,290 between 1990 and 2000 (Aponte, 2001). The top 8 counties in Indiana in terms of the size of their Latino populations are primarily those that experienced the most growth between 1990 and 2000, including, in order, Lake, Marion, Elkhart, Allen, St. Joseph, Tippecanoe, Porter, and Kosciusko. Only three counties experienced a decline in Latino population during this time period (STATS Indiana, 2009).

Similar to the early Latino immigrants to Indiana, those who have arrived more recently are overwhelmingly of Mexican origin, with others from various Spanish-speaking Caribbean, Central, and South American nations. Nearly 82% of Indiana's foreign-born Latinos were born in Mexico, another 8% or so come from Central American nations, such as El Salvador or Guatemala, about 4% come from Caribbean countries, and the remaining 6% are from South America, mainly Peru and Venezuela (Conover, Rogers & Kinghorn, 2005). As a result of this, much of the existing research concerns issues specific to the Mexican-origin sector of Indiana's Latino community, since it is so large compared to those of other national origins.

Aside from the significant growth in the Latino population between 1990 and 2010, it is also necessary to highlight some salient characteristics of this population that will become more relevant in the forthcoming investigation of Indiana's language policies. As previously stated, the primary focus here will be on status planning and acquisition planning for languages as they affect Indiana's Latinos. Since educational institutions are primary sites for language acquisition planning, (Cooper, 1989), it may be useful to highlight the percentage of Latinos in the state who are or will be of an age to attend school. According to US Census data (2010b), 141,464 Latinos in Indiana are under the age of 18. That is over one third of the total Latino population. For the state's population as a whole, less than 25% are 18 or

younger. Judging by these data, high proportions of Indiana's entire Latino population either are or will be attending schools, where it is very likely that many of their peers and teachers will be monolingual English speakers.

In addition to underscoring data on the ages of Latinos in Indiana, it will also be useful to distinguish some of their linguistic characteristics, since identifying oneself as Latino on a survey or in the Census does not necessarily indicate fluency in Spanish or lack of fluency in English. US Census data (2010c) indicates that about two thirds of Indiana's Latinos over the age of five speak Spanish at home, and about half of those who speak Spanish in the home speak English "less than very well." This recent data is echoed by previous research, as well, indicating that this trend is ongoing (Conover, Rogers, & Kinghorn, 2005). Therefore, issues of language planning and policy are extremely salient to the Latino population in Indiana, with high proportions of young people who either are or will be attending schools, in addition to the half of the population that is not proficient in English.

With the historical context of Indiana's Latinos and the data on their more recent and current situations in mind, the following section will explore the history of language planning and policy practices in Indiana as they affect Latino communities.

Language Planning and Policy in Indiana—State and Community Levels

Language in Government

With a total state population that is still overwhelmingly composed of native speakers of English, as only 8% of Hoosiers over age 5 speak a language other than English at home, it may seem that Indiana has had little need for establishing an "official" language (US Census Bureau, 2010d). However, the Indiana Code, the set of laws established by the General Assembly, does include an official policy on language for the state. According to Indiana Code 1-2-10-1, "The English language is adopted as the official language of the state of Indiana." This section was added to the Indiana Code by the General Assembly in 1984, and it goes no further than this one simple sentence. English is not specifically designated here as the exclusive language of government, business, or educational instruction, nor is it indicated whether or how this law should be enforced. In their study of language and education policy in Indiana, Simich-Dudgeon & Boals (1996) suggest, "the most important function of the [English-only] law seems to be to serve as a symbol of state unification and of the collective history and traditions of the people of Indiana" (p. 551). Since this law lacks specificity and does not seem to be enforced, its power as a symbol of a unified, English-speaking state may not be so strong. It may serve as a relic of a more culturally and linguistically homogeneous era in Indiana, but as a little-known portion of the Indiana Code, it may not really affect other state policies and practices. While recent developments in immigration law in Indiana, including attempts to promote strict law enforcement policies that would impact undocumented immigrants, do warrant mention here, as they reflect the social and political climate affecting Latino immigrants, the discussion of this law and its legal challenges lies outside the scope of this paper. Rather, this inquiry continues with an

examination of some other state and community level initiatives and practices that will paint a clearer picture of language planning and policies for Indiana's Latino population.

Government-Sanctioned Language Policies in Action

While the state's legal code may assert that English is the official language of Indiana, a variety of organizations and services reveal that Spanish is at least recognized as a valid and even necessary form of communication. By browsing the website for the Indiana government, it becomes evident that in some cases, the state does attempt to reach out to the Spanish-speaking Latino community by offering documents translated into Spanish, and some translation services. However, the website may be difficult to navigate for someone with little or no English fluency, since there is no text in Spanish on the home page (State of Indiana, 2012). It is only through clicking on the help button that one can find a link called "Información de Indiana," which leads to several documents translated into Spanish and one more website in Spanish. The documents consist of a directory of phone numbers for state agencies, facts about Indiana, a guide for potential business owners, and a welcome letter, including several additional listings for phone numbers and websites linked to information regarding taxes, license branches, and state recreation opportunities. The additional website is part of the state's court system, providing forms, telephone numbers, and descriptions of procedures for legal actions translated into Spanish (Indiana Courts, 2012).

Along with the translated documents and websites for native Spanish speakers, the government website links to a couple of available language-related services. The Indiana Judicial Center, in cooperation with Ivy Tech, offers "workplace Spanish" courses to "any employee in the State of Indiana who directly reports to a judicial officer of a trial court of record or employees of the Clerk's office assigned to work with the courts" (Indiana Judicial Center, 2012). These courses are designed for court employees to become proficient in beginning Spanish, learning things such as greetings, directions, and how to explain legal proceedings. For some employees, who must be authorized by their departments, the course will be free of charge, while others must pay out of their own pockets to take the course. It is unclear whether there would be any tangible benefit to the employee (i.e., a pay increase or job promotion) as a result of completing this course, but it may provide access to employment in a wider range of communities, including those with higher concentrations of native Spanish speakers.

For Spanish speakers, the state website also lists locations where they may receive free assistance in Spanish in preparing their taxes. This list may not be exhaustive, as many communities may offer services through their own volunteer or community organizations: there are only locations listed in Indianapolis, Lafayette, Merrillville, and Bloomington (Indiana Commission on Hispanic/Latino Affairs, 2012). The ICHLA, which is the aforementioned organization providing the information on Spanish language assistance for tax preparation, acts as the umbrella organization for the state in research, planning, and recommendation of policies and

practices that affect the Latino population. The goals and initiatives of the ICHLA are quite varied, with the overarching theme of bridging cultural gaps between Indiana's Latino and non-Latino communities through increasing cultural competence on both sides and promoting greater social and economic equity (ICHLA, 2011). The ICHLA's Strategic Plan for 2011-2012 lists a series of five "challenges" faced by Indiana's Latino community, as well as objectives and strategies that will be implemented to address these challenges. Several of the strategies proposed to address the various challenges include elements of language planning. For example, the first challenge identified by the ICHLA is "Qualified child care availability and child care business development" (ICHLA, 2011). Essentially, policymakers want to help ensure that Latino families have information about and access to quality child care, as well as to aid Latino child care providers in the process of becoming certified. Strategies proposed to help tackle this challenge include providing English-language development courses to Latino child care providers to help them navigate the certification process, as well as creating an ICHLA partnership with another state agency to provide Spanish-language workshops for families seeking child care (ICHLA, 2011). These are examples of both acquisition and status planning for Spanish and English: English courses for child care providers will expand the number of English speakers within this community, while offering Spanish-language workshops for parents sends the message that this important information should be available in both Spanish and English. Two more of the five listed challenges in ICHLA's 2011-2012 Strategic plan, curbing recidivism among Latino youth and increasing school readiness, also include strategies that focus on language planning, such as Spanish-language public service announcements around important programs and current issues. The existence of the ICHLA as an arm of the state government, along with the various state websites and services available in Spanish indicate the recognition of Indiana's Spanish-speaking Latinos as an important minority group with a variety of concerns to be addressed, and as the ICHLA's Strategic Plan (2011-2012) illustrates, language planning is often one method of addressing these challenges.

Implications of State-Level Language Policies and Practices for Indiana's Latinos

Although the evidence of explicit language planning and implementation of any official language policies by the state government is relatively scant, the few previously mentioned examples may reveal some prevalent attitudes and values held by those in power regarding language status and acquisition. Many of the translated documents and websites widely available provide information for Spanish speakers on how to comply with common procedures, laws, and regulations. The two most prominent cases are those of the tax preparation assistance and the plethora of information available around the judicial system. By offering free and state-sponsored sites, few and far between though they may be, where Spanish-speakers may receive help in filling out their tax forms, the government sends the implicit message to the Latino population that their tax dollars are, indeed, quite important. In much the same way, the state's court system

clearly values its role in the lives of Indiana's Spanish speakers, as this is the only example of a state agency offering to pay for Spanish classes for its English-speaking employees, at least as indicated by the state's website. There were also many more translated documents and websites linked to the Indiana judicial system with information for Spanish speakers who may need to appear in court or become otherwise involved in legal matters. Here, it seems clear that the courts wish to ensure that those who do not speak English may still have an understanding of legal procedures, either through online documents or through court employees who have gained a beginning knowledge of Spanish. These two examples of language planning and policy at the state level do not necessarily demonstrate a rise in the level of status for Spanish or an emphasis on Spanish acquisition for English speakers. Rather, they show the areas in which communication in the native language has been deemed necessary, in order for Spanish speakers to conform to laws and procedures that the state considers to be important. As stated in the Indiana code, English remains the "official" language of Indiana, and the de facto language of law and government, in spite of some efforts to accommodate native Spanish speakers.

In order to provide a glimpse into how the government's policies and practices around language status and acquisition affect a portion of Indiana's Spanish-speaking population, evidence will be cited from a recent study of ESL and language services in one rural Indiana county (Pawan & Thomalla, 2005). While the overall population of this county is rather small, at 14,000, and the Latino portion is only about 1%, planning for language is still an important task for many in business, education, and local government. In their research of the kinds of language services that were being offered to the Latino immigrant community, Pawan & Thomalla (2005) found that many services were quite scattered and showed little evidence of any planning. For example, interpretation services for Spanish speakers in hospitals, courts, and even schools were often provided only on an ad-hoc basis by untrained bilingual staff or volunteers. Several of the largest employers in the county did provide free ESL classes to their Spanish-speaking staff, but sometimes classes were not well attended due to their inconvenient sites or times. Two of these companies also offered beginning Spanish classes to their management staff, but employees were responsible for paying for these courses. This study of one rural Indiana county demonstrates that the lack of language planning and clear language policy at the level of the state government trickles down to adversely affect local governments, where inconsistent planning results in rather spotty language services for native Spanish-speakers.

Language Planning and Policy in Indiana Schools

While the examples of language planning and policy implementation for Indiana's native Spanish-speaking population at the government level are sparse, educational systems and institutions provide for many more official and unofficial illustrations of status, and especially of acquisition, planning. As this study focuses on schools as main sites for implementation of policies regarding language acquisition, it will be useful to consider relevant legal decisions, both at federal and state levels, which help to determine language policies for educational institutions. Although education

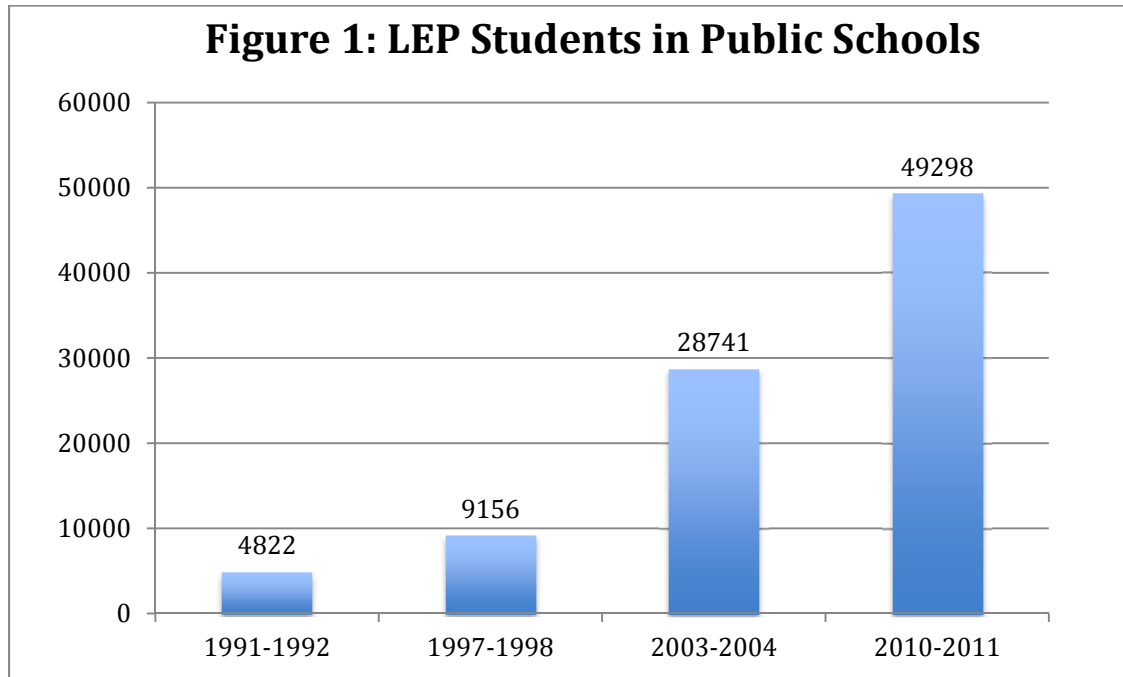
is officially to be legislated and managed by the government of each state, several pieces of federal legislation influence how this takes place. Beginning with Title VI of the Civil Rights Act of 1964, no federally funded agency (including public schools) may discriminate on the basis of sex, race, or national origin. While this statute may not explicitly prohibit discrimination on the basis of native language, the portion of it dealing with national origin may apply to this kind of discrimination, since so many Spanish-speaking Latinos hail from other nations. Shortly following the Civil Rights Act was the Bilingual Education Act or Title VII of the Elementary and Secondary Education Act (ESEA) of 1968, and reauthorized in 1994, which stated that schools must provide supplementary educational programs to address the needs of culturally and linguistically diverse students. On the heels of this came *Lau v. Nichols* in 1974, wherein the US Supreme Court ruled that failing to provide supplementary language services and education to children who spoke a first language other than English was, in fact, discrimination on the basis of national origin. More recently, the Bilingual Education Act has been replaced with Title III of the No Child Left Behind Act of 2001, which shifts the focus from bilingual educational programs to an emphasis on English acquisition for students who do not speak English as a native language. In order to comply with these pieces of legislation and the aforementioned Supreme Court decision, Indiana schools must accommodate their Spanish-speaking Latino students with some level of extra service for language education.

Possibly in response to the *Lau v. Nichols* decision, Indiana lawmakers passed House Enrolled Act 1324 in 1976, modeled closely after the earlier federal Bilingual Education Act. The goal of HEA 1324 was twofold and somewhat contradictory: to prepare non-English-speaking students for full participation in mainstream classrooms while also providing bilingual and bicultural education to value the home language and culture. This measure was passed due to some pressure from the Concerned Latinos Organization (CLO) of northwest Indiana, which thought it necessary that Indiana schools begin to address the needs of Latino students. In spite of the inclusive language and lofty goals of HEA 1324, it has never helped Indiana's Latino students to gain better educational opportunities, because the General Assembly has never appropriated funds towards its enactment (Simich-Dudgeon & Boals, 2001). The goal of bilingual/bicultural education for Latino students remains largely symbolic, with current practices and policies demonstrating a very different stance towards language acquisition.

The Current Situation—Latinos in Indiana's Schools

Before outlining the language policies currently implemented for students in Indiana's public schools, it is necessary to show the demographic context of school-aged Latinos in this state. Similar to the population of the state as a whole, the Latino population in public schools has been growing quite rapidly over the last couple of decades. The following graph illustrates the growth in the number of Limited English Proficiency (LEP) students over several years. While not all LEP students in Indiana speak Spanish as a native language, the vast majority (79%) of

them do, so this chart may be a fairly valid indicator of Latino population growth. Data are from the Indiana Department of Education (2012a).



As evidenced by these data, the population of LEP students, and thus of Spanish-speaking Latinos, in public schools in Indiana has grown exponentially over the course of the last twenty years, with nearly 50,000 LEP students in the state as of the most recent school year for which data are available. As of the 2010-2011 school year, 8.4% of public school students in Indiana were Latino, and nearly 5% of all students were identified as LEP (Indiana Dept. of Education, 2012a). Indianapolis Public Schools, which is also the largest school district in the state, has the greatest number of LEP students (Indiana Department of Education, 2012b). These trends and statistics mirror the demographics of the state's Latino population, with the benefit that schools track data not only on race and ethnicity of their students, but also on their language proficiency.

Since Indiana schools are currently serving many more Latino and LEP students than previously, they have adopted policies and practices to address their educational and language needs. Much like the vague language of the "official" English policy in Indiana, the Indiana Academic Code, which serves as the legal outline for how public schools must operate in this state, does not provide much clarity on how education for English language learners should take place. The Code states "[e]ach school corporation shall provide appropriate instruction to limited English proficient students" (511 IAC 6.1-5-8). On one hand, this leaves significant flexibility to diverse school districts, some of which might have high proportions of LEP students, and some of which might have none. However, this rather ambiguous statement leaves open to question what "appropriate instruction" might entail, and many school administrators could interpret this in very different ways. The state's

Department of Education does include an Office of English Language Learning and Migrant Education, which serves as a resource for guidelines for the identification, instruction, and assessment of ELL students, simply ensuring that state-level procedures are aligned with federal requirements (Indiana Dept. of Education, 2012c).

Besides creating the Office of English Language Learning and Migrant Education, Indiana also designates funding for “Non-English Speaking Programs,” (NESP) for districts and schools that serve students whose first language is not English. These NESP funds are meant to serve as a supplement to federal funding for Title III of NCLB, which may be spent in very limited ways. According to the Indiana Urban Schools Association ESL Collateral Group (2009), NESP funds are generally used to provide salaries for ESL teachers, translation of school documents into Spanish, ESL curricular materials, and professional development for teachers. NESP funds are often inadequate for providing any sort of additional programs, such as bilingual or dual-language classrooms.

Implications for Language Policies and Practices in Education for Indiana’s Latinos

While remaining compliant with federal legislation and court rulings regarding education for students with limited English proficiency, Indiana’s government and Department of Education have shown through their policies and practices regarding language in education that English will continue to be the most important language for accessing the best instruction in most of Indiana’s public schools. Simply examining the language used to describe the laws and organizations concerned with these issues reveals much. Rather than using terms such as multicultural, bilingual, or diversity, the state lawmakers have designated the Office of **English Language Learning** and Migrant Education, along with **Non-English Speaking Program** funding. The Indiana Academic Code refers to “appropriate instruction for **limited English proficient** students,” and those NESP funds to provide that instruction almost always allow for an **ESL** teacher, rather than bilingual staff. Clearly, those in power in the state government value English acquisition for Latino students and seem to be doing little in terms of helping these students to maintain and develop their native language or to preserve their cultural heritage.

Local Language Planning and Policies in Community Organizations

Since much of the research and evidence examined thus far has dealt with language planning and policy at the government or institutional levels, it may be useful to briefly investigate the recent work and presence of Latino community organizations in Indiana to determine how they address issues of language planning for those involved. The Indiana Latino Institute is one of the largest organizations for helping to address the needs of Indiana’s Latino community, and bills itself as “the leader in the Latino community in Indiana for advocacy, resource and referral, research and community assessment and model program development for Latino adults and youth” (ILI, 2012). According to its website, the ILI also offers translation services between English and Spanish, but besides hosting a website that is available in

either Spanish or English, that is the only indication of a concern with language planning. It seems that the ILI may be a means to learn about other organizations and resources of the Latino community around the state. Another one of these is La Plaza, a Latino community organization based in Indianapolis. According to their website, they offer scholarships to Latino students, summer and school-year enrichment programs, and translation services (La Plaza, 2012). An hour south of Indianapolis, Su Casa Columbus offers similar interpretation and translation services, in addition to classes in both Spanish and English for community members and a Spanish language newspaper (Su Casa Columbus, 2012). Levinson, Everitt, & Johnson (2007) found that comparable community organizations for Latinos also exist in Noblesville, Fort Wayne, Bloomington, and Martinsville. These local advocacy organizations serve to provide assistance to both Latinos and other community members in increasing cultural awareness, and especially in helping Latinos to adapt to linguistic and cultural differences. While these organizations serve important purposes to their communities and likely help to improve the lives of Latinos within their communities, their services may not be as frequent or as permanent as those offered by governmental institutions. As Levinson et al. (2007) point out, these nonprofit centers “must constantly justify their activities and search for ongoing funding. They are especially vulnerable to political trends and economic downturns” (11). As sites where language planning is certainly taking place, in the form of language classes, translation services, and even Spanish-language publications, these Latino community organizations may have tremendous influence on cross-cultural attitudes in the communities they serve. However, further research is necessary to determine how effectively they are meeting their goals and how their practices affect planning for language status and acquisition.

Conclusion

This review of the literature and of some available data regarding language planning practices and policies in Indiana has revealed that while state and community organizations are beginning to address issues of diversity in language and culture between Indiana’s Latinos and non-Latinos, there is still much work to be done. As the recent US Census data has shown, the Spanish-speaking Latino population in Indiana has grown rapidly in recent years. Several state agencies, such as the Judicial Center, have begun to offer services and translation to meet the needs of Latino community members. School districts have also been mandated by both federal and state legislation to offer supplementary educational services to Latino students, which usually include some form of ESL instruction. Localized community organizations across the state offer classes and translation services, as well, in hopes of bridging the cultural gaps that may exist between Latinos and non-Latinos. In all of these cases, the evidence of explicit language planning and policy implementation is somewhat scattered. While Indiana’s official language is designated as English, this law has been unenforced and serves as a symbol more than a binding rule. However, English continues to hold its status as a more valuable language than Spanish for Indiana’s Latinos, as evidenced by the consistent emphasis on English acquisition in education and the relative lack of focus on Spanish acquisition for either educators or government officials. Spanish

speakers are bringing valuable and diverse cultural and linguistic resources with them to Indiana, and these resources might disappear if educational institutions, government agencies, and community organizations fail to utilize and value them. It seems that part of the solution may lie in more intentional and explicit planning for language status and acquisition for native Spanish speakers in Indiana, so that their native language may increase in functionality here, and begin to be acquired and maintained by a broader spectrum of people.

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Teacher oral-language use as a component of students' learning environment in mathematics and science

Iris P. Hewitt-Bradshaw

Abstract

This paper adopts a qualitative approach to investigate classroom interaction in mathematics and science at the elementary school level. Specifically, it examines teacher oral language to elucidate the role it plays in shaping students' learning environment in a Creole language context. Using a framework of Halliday's systemic-functional linguistics and Bourdieu's social theory, I analyze six instructional episodes in mathematics and science to uncover features of teachers' oral language that influence students' learning environment. The analysis suggests that teachers' classroom speech reflects the linguistic complexities of school mathematics and science, and can be challenging for learners' comprehension, especially in a second language situation. Sociolinguistic aspects of classroom interaction are also important to fully understand how teacher language affects student engagement in classroom discourse when their active participation is crucial to the understanding and use of academic language. Based on the findings and the research literature, I offer recommendations and a strategy for teachers who wish to use language in ways that better facilitate student learning across the curriculum.

Introduction

Although the major concern in language education has largely been on mother-tongue language situations and foreign or second language education, there is now also a recognized body of literature that focuses on the role of language across the curriculum. One strand of such research has allowed inquiry into the complex process of how children are initiated into disciplinary fields such as mathematics and science using a language other than the primary one in which they think and communicate (Cummins, 1978, 1979; Lemke, 1990; Vollmer, 2007, 2009). This paper reports on an investigation of teacher classroom practice, specifically teacher oral-language use, with the aim of making recommendations for improving practice in the context of educational concerns about the challenges that students face when they learn disciplines in a second language or dialect.

Learning through Academic Language

Even when learners' first language is used as the official language of instruction in schools, they still need to develop proficiency in the academic language they are required to use in order to succeed in schools (Fang & Schleppegrell, 2010; Lager,

2006; Nagy & Townsend, 2012; Schleppegrell, 2007; Zwiers, 2007). Research further suggests that students from low-income homes are at a disadvantage if they do not possess the linguistic capital that schools value (Vaish and Kiang Tan, 2008), and that teacher language can affect students' performance and success (Nassaji & Wells, 2000; Tsay, Judd, Hauk & Davis, 2011), as well as their social prospects and citizenship (van Goor & Heyting, 2008). Furthermore, research has shown that classroom discourse patterns can both develop and impede students' language growth (Zwiers, 2007). Ernst-Slavit & Mason (2011) support the view that a teacher's oral language in content areas sometimes provides learners with limited exposure to the specialized language of the disciplines, and that some terms and expressions that teachers use inhibit students' understanding. In light of this, teacher oral-language use can be considered a significant component of the students' learning environment. Here I use learning environment to refer to the physical, social, psychological, and linguistic conditions under which students learn in schools.

Concerns about the impact of teacher oral-language use are particularly significant in multilingual and multidialectal educational situations where the language of instruction is different from the students' vernacular. In fact, teacher language use emerged as a significant theme in a study I conducted in Trinidad and Tobago, a Caribbean postcolonial state where the official language of instruction in schools is Standard English (SE), while the vernacular of the majority of students is a related Creole language. Trinidad and Tobago is a political union of two small islands in the Caribbean region where the majority of the population speaks an English Creole, but the official language of instruction across the curriculum is SE. A similar situation exists in other Caribbean countries such as Jamaica and Barbados.

The complexities of this situation have been documented and debated in Caribbean research in education for a long time, and educators have highlighted linguistic, social, and psychological consequences for education systems (Simmons-McDonald, 2004). The consensus is that the situation not only creates difficulties for students' language learning, but also for their learning across the curriculum, given the importance of language in schooling. Although there have been attempts to use research-based educational programs in Caribbean Creole language complexes (see for example Craig, 2006), the influence of linguistic and sociolinguistic research on educational policy, planning, and implementation in the Caribbean region is limited. In a context of official policy that promotes constructivist approaches to instruction, requires teachers to be models of SE use, urges respect for students' Creole language in the classroom, and recommends that students be allowed the use of their first language at the earliest levels of their schooling (Draft Syllabus for Primary School Mathematics, 1998; Syllabus for Primary School Science, 2003), teachers have to decide how much control to exert over the teaching-learning situation. For example, when they communicate orally, teachers must decide what to say and how it should be said. They must also be mindful of the length of time they speak, to allow students opportunities to express themselves. Competing expectations and responsibilities can create a dilemma of voice and agency for teachers. Reflection on and analysis of classroom language use is an important initial step in clarifying the

process, resolving confusion, and making informed decisions for practice. Interestingly, the added challenge of using SE academic language in Creole language complexes of Caribbean states has not been the subject of much discussion. Debate has traditionally focused on the most effective methods and approaches to language teaching and learning, the role of vernacular varieties in education, and the impact of negative attitudes towards such varieties.

The issue that is the subject of this study is part of a wider debate about multicultural education, and the ways in which schools can acknowledge and respond to the language of different communities from which children come. Language is an important part of learners' cultural identity, and where the form and use of their language differ from the one sanctioned by the school, the consequences for children's learning must be considered. The work of Heath (1983), Delpit (1995), Cazden (2001), and Valdés (2004) underscore the importance of accommodating cultural diversity in classrooms, since language is crucial to the way children's success and achievement are measured in schools. Furthermore, concerns are frequently articulated about low levels of student achievement in mathematics and science. This study can therefore contribute to inquiry into classroom processes since it provides description and analysis of classroom teaching and learning at the primary level in the content areas of mathematics and science. It can also contribute to the curriculum of teacher education programs, and has the potential to encourage practicing teachers to be reflective about their language use when they facilitate student learning across the curriculum.

Theoretical Framework

Systemic-functional linguistic theory (Halliday, 1978, 1993) provides a socio-linguistic framework that allows an analysis of teacher language. From Halliday's perspective, language variation is viewed in terms of the diversity in structures and processes in society, with language use in speech communities being seen as functional, communicative events that create meaning in a specific social and cultural context. It is also part of a semiotic process of making meaning through the use of specific linguistic choices. Basic concepts of systemic-functional linguistics are text, context, tenor, and mode (Halliday, 1978, 1993). Text is produced in the course of an event that occurs in a social context. This context is framed by the social activity taking place, the tenor or relationship among the participants, and the mode or rhetorical channel through which communication takes place. Halliday used the term "register" to refer to a "set of meanings that is appropriate to a particular function of language, together with the words and structures which express these meanings" (1978, p. 175). The variety of language is appropriate to a particular type of social situation, serves a specific function, and is characterized by domain-specific vocabulary, appropriate styles of meaning and words of argument. Registers link texts (oral, written, or visual) to their context. By virtue of context, purpose and form, there will be differences between the register of a school discipline and the everyday language that students use at home. Viewed in terms of participants, form, and context, each discipline in the school curriculum can thus be considered a register that constructs knowledge in specific ways. Schools attempt to teach

students to use this register to participate effectively in subject-specific ways of knowing. The structure and the conceptual demands of content-area texts affect the sense that learners make of those texts, how learners respond to them, and how they learn from them (Vacca, Vacca, & Mraz, 2011). Teachers' oral language is an example of one of the texts that students must negotiate in order to learn mathematics and science. Students' prior language and experiences must of necessity be considered in any analysis of their understanding and their contribution to classroom discourse.

While systemic-functional linguistics provides a framework for understanding the existence of different language varieties in the classroom, it is limited in explaining the conflict and tensions that are at times overt, but can also operate covertly, in schools and classrooms. From a sociological perspective, Bourdieu (1977) offers a theory of practice with constructs such as "habitus," "field," and "linguistic capital" which help us to understand teacher language use in teaching-learning situations where students only partially share the language, behavior and attitudes promoted in schools. Bourdieu viewed schools as a formation of the state that reflects the knowledge and values of the dominant social groups. Through the process of socialization, children acquire cultural background, knowledge, and dispositions that equip them with social and linguistic capital. Only those forms of capital associated with dominant social groups are valued by schools, to the disadvantage of those groups with different knowledge, dispositions and lifestyles. In such a situation, social capital and linguistic capital are critical resources for success in schools. Habitus is an "expression of subjectivity" (Grenfell, 2009); a set of dispositions that people acquire through their social roles. It is thus a product of routinized, conscious and unconscious habits that are evident in people's behavior, including their language and language use. The structures constitutive of a particular type of environment

([e.g. the material] conditions of existence characteristic of a class condition) produce *habitus*, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles of the generation and structuring of practices and representations which can be objectively "regulated" and "regular" without any way being the product of obedience to rules. ...

Habitus guides teachers' actions and decisions and shapes their language and language use since ... agents are possessed by their habitus more than they possess it; this is because it acts within them as the organizing principle of their actions, and because this *modus operandi* informing all thought and action (including thought of action) reveals itself only in the *opus operatum*. (Bourdieu, 1977, p. 72, 18)

Bourdieu suggests here that action is both conscious and subconscious. Because the culture of the dominant group is privileged in schools, social stratification is reproduced due to unequal access to the valued social and linguistic capital. Teachers and students operate within a "field"; that is a

Network ... of objective relations between positions. These positions are objectively defined, in their existence and in the determinations they impose upon their occupants, agents or institutions, by their present and potential situation ... in the structure of the distribution of species of power (or capital)[.] (Bourdieu & Wacquant, 1992, quoted in Grenfell, 2009, p. 441)

The usefulness of Bourdieu's theory for a language-in-education study like this one is the opportunity it presents to analyze the nature of academic discourse and understand how it contributes to classroom knowledge and organization, and how it can impact student learning. The concepts of field, habitus, and linguistic capital are useful to understand teacher language as a facet of teacher practice in the field of education where tensions exist between the linguistic capital and the behaviors and attitudes that have been internalized by teachers and students.

Research questions

The following questions were used to explore the central issue, in keeping with the theoretical framework outlined above:

1. What role does teacher oral language play in shaping students' learning environment in mathematics and science?
2. How can teachers increase their awareness of their language use to foster classroom environments that better enable student learning?

Methodology

This study emerged from a larger case study of the language challenges that students face when they are taught mathematics and science in SE in a situation where their vernacular is a Creole-related language. The case study adopted a qualitative, ethnographic approach to investigate three elementary classrooms—Infants (5 – 7 years old), Standard 1 (7 – 9 years old) and Standard 4 (10 -12 years old)—at one purposely selected school site in a community located on the outskirts of a city in Trinidad. Four trained teachers participated in the study: one in Infants, two in Standard 1, and one in Standard 4. The students were all from working-class homes in the community. Data for the study included documents, interviews, classroom observation, lesson transcripts and fieldnotes as data collection methods. Data analysis was inductive and interpretive (Creswell, 2008) and involved techniques of coding, categorizing, and identifying salient themes across the subcases. All data were read repeatedly and coded. Following Miles and Huberman (1994), the data were then subjected to a process of data reduction. This involved a selection of segments of the data that would elucidate the research questions and a formation of categories and themes on the basis of constant comparison. Teacher language emerged as one significant factor in the three classrooms observed. This paper utilizes illustrative instructional episodes from lesson transcripts recorded for the main study. Stake (2010) offers a useful description of the process:

Much qualitative research is based on the collection and interpretation of episodes. Episodes are held as personal knowledge more than as aggregated knowledge ... An episode has activities, sequence, place, people, and context. Some of the more useful-appearing episodes, the ones we think of as “patches,” need to be studied, analyzed, their parts seen and seen again. We observe them, and we record other people’s observations. We interpret them and seek other interpretations. We put things together and take them apart ... And sometimes we put the facts together into new wholes, into new interpretations, into a new patch. (133-134)

The following communicates my interpretation of the instructional episodes within the theoretical framework previously described.

Findings

The commentary is an analysis of six illustrative episodes in mathematics and science from three classrooms. They exemplify the salient issues interpreted within the theoretical framework discussed previously, in a context where students from a working-class background, speaking an English-related Creole vernacular, were being taught in a variety of Trinidad SE. All names used in the episodes are pseudonyms.

Illustrative Episode 1 – Which is most liked or least liked?

At the infant level, a mathematics lesson on statistics provided examples of challenges arising from the teacher’s use of the register of a school discipline. Ms. Blake began the lesson with an activity involving comparison, and then directed students’ attention to their books where a pictograph was already drawn representing children and the flavors of ice cream they liked.

T: Okay, this is strawberry. Let’s count how many children here.

Ss: (*counting with T.*) 1, 2, 3, 4, 5.

T: 5 children like strawberry.

S: I ready.

T: The next one is ... chocolate. One child likes chocolate. And how many children like

vanilla? (*counting with some students*) 1, 2, 3.

S: (*shouting*) 3!

T: So which flavor is the **most liked**?

(*Students do not respond to the question*)

T: Which flavor do the children **like most**?

S: (*shouts*) None!

S: Vanilla.

T: Vanilla? How many children like vanilla?

S: 3

T: And how many like strawberry?

S: 1

Ss: 5

T: Which flavor is the **most liked**?

Ss: *(do not respond)*

S: *(after a short while)* Strawberry.

T: Strawberry, because five children like strawberry.

At this point, the teacher repeatedly explained the term *most liked*. She expressed the central idea in different ways: *most liked* was explained as *like most*. The term was also repeated. However, when it was apparent that many students still did not understand, the teacher eventually instructed them to write the correct answer, *strawberry*. She later addressed their difficulty in determining whether they should put the number of persons or the word indicating the flavor. She positioned students as responders to a third party, “they,” who supposedly asked the question that they wanted to know the answer to.

T: **You** want to know what flavor not how many. **They’re** not asking **you** how many. Which flavor, and the name of the flavor, Michael?

Michael: Strawberry.

T: That’s right, so **put** the name strawberry.

S: *(Makes a comment that is not clear)*

T: Um, the other flavor is chocolate and ... One child likes chocolate... *(breaks off again to rebuke some students who are not doing their work and sends one to stand near the door. She continues circulating and instructing individual students.)*

T: Okay, so **put** the word strawberry there, okay?

T: Now the question is, which flavor is the **most liked**? Which flavor is the **most liked**?

(Students speak, but do not respond to the question. One complains about another student).

T: Paul, sit down. Michael?

Michael: Strawberry.

T: Right. Are **you** going to write 5 here or strawberry?

Ss: Strawberry.

T: Not the number of children, but which flavor.

S: *(loudly)* Chocolate!

T: **Put** strawberry.

As the lesson continued, the same difficulty arose when the teacher used the term *liked least*, so that, at the end, most students experienced difficulty with the concepts of *liked most* and *liked least*. The teacher indicated which answer to write in the appropriate spaces in their books.

This episode shows how problematic teacher language use of terminology from the register of a school discipline can be for learners, irrespective of how simple terms and structures appear to be. The teacher’s use of pronouns in the episode is also significant. She used “you” in reference to the students’ presence or voice in the mathematics problem and introduced a third person “they” as the party

asking the question. This raises the question of agency in teaching and learning disciplines. The teacher told the students what “they” wanted to know; stated that they were being asked the question by “they”; and she told them on several occasions to put *strawberry* as the answer. Teacher language can be examined to determine how it establishes agency in classroom discourse (Wagner, 2007). Close examination of the prevailing pattern of classroom discourse reveals that it is one of teacher initiation, student response, followed by teacher evaluation or feedback (IRF) as described in Cazden (2001). This ensured a predominance of teacher talk in classroom discourse and limited meaningful oral participation by students who gave one or two word responses in this teaching-learning segment.

Illustrative Episode 2 – Saying the correct thing

Although teacher talk dominated classroom discourse at the infant level, compared to the older students, infants enjoyed a greater degree of liberty with respect to how and when they spoke, frequently responding in a chorus or loudly shouting out answers. The teacher rebuked students mainly on occasions when they were inattentive or off-task, or when the noise level became excessive. However, she sometimes praised their use of SE as a model.

Luke: Miss, I am ready!

T: So am I. See how Luke always says the correct thing? He never says ‘I ready’ or ‘I is ready’. He always says ‘I am ready’.

Luke: I am ready.

T: I’m coming, I am coming. Luke, 5 children like strawberry, so draw 5 little children next to the word strawberry.

S: I like strawberry.

T: O’Neal, next to the word strawberry, draw 5 little children.

S: Where the word strawberry?

S: Miss...

(Children chat while following instructions and T circulates and directs them how to complete the work in their books).

The teacher’s praise for the use of the structure “I am ready” encouraged Luke to repeat it. Later in the lesson, two other students echoed the sentence and others fashioned sentences using SE syntax, thereby receiving the teacher’s praise. Although I never heard this teacher rebuke students for using Creole in the classroom, the attitude that one variety is superior to the other is implied. Students discerned what the preferred way of speaking was and some responded accordingly, getting an opportunity to practice SE grammatical structure. This episode illustrated the way in which one variety was privileged over others in the classroom.

Illustrative episode 3 – Don’t break the rules

To varying degrees, teachers used language to regulate students’ participation in classroom discourse and set boundaries that limited the time, manner and purpose

of their verbal responses. This was frequently demonstrated when teachers sought to regulate students' talk to have it conform to their expectations of what were acceptable ways of conducting classroom discourse. In science at the Standard 1 level, students played with the words and chatted generally at the beginning of the lesson. However, the mixing of the formal and social did not meet with the teacher's approval and she immediately invoked classroom procedures to regulate their behavior.

T: Hello, sit up. Turn to page 13.

S: Tirteen.

S: Tuteen?

T: Thirteen.

S: Miss, I fine it.

S: I done fine it aready.

S: Ah fine it.

(Students are speaking generally as they find page 13)

S: 1-3.

T: Yes, 1-3. Turn to page 13.

(Page 13 shows a picture of the skeletons of three animals. There is much talking as students try to locate page 13)

T: Hands up, out, up, out, down. Now this morning, I want you to look up here. Right. Keep your eyes here. Now, there's a picture on page 13. Do you see that picture?

Ss: Yes, Miss.

T: Right, now remember, I don't like people shouting at me, right?

The teacher invoked the "hands up, hands out" routine to address student vocal play and what she anticipated would be their "shouting" at her. These were contentious issues in this lesson and in most lessons I observed in this classroom. Even when they were focused on a teacher-directed task, students' freedom to talk was controlled within teacher-determined boundaries. In addition to the manner in which they responded, their answering without being called was also deemed unacceptable. What Ms. Bajnath considered to be acceptable speaking behavior was so important to her that she had negotiated what she referred to as a "deal" with them prior to the start of the lesson.

T: Alright, you said that already. Very good. That is so. When you go to the doctor, and he takes an x-ray, you are able to see the bones in your body.

S: And he does give you a picture.

(Students give rapid responses to elaborate on the response.)

T: *(Loudly)* Listen, listen, wait up. *(In a softer tone)* Remember this entire week we had a deal?

Ss: Yes, Miss.

T: And what was the deal? You don't shout at me, I don't *(pause)* beat you. Right. Don't shout at me. Good. *(Standing in front of the class and*

demonstrating.) Now, I would like you to take your hand, and pass it along the back of your friend.

(Students turn to seatmate and trace as teacher shows).

The teacher thought students' talk created noise because they "shouted," so she responded very emotionally, and her tone varied from loud and angry, to soft and reasoning. This scenario was repeated at several junctures of the lesson to address what she saw as breaches of the speaking rules. At times, silent reprimands momentarily suppressed students' enthusiasm and participation; then their exuberance would resurface, and loud, animated talk ensued, until the teacher eventually stopped the lesson. Her rebuke was a code-mixing of Creole and Standard English.

(Students are calling out to the teacher, answering and commenting all at once)

T: Stop, stop. *(Pause)* Ah have ah feeling you all behaving like this because Miss *(the researcher)* is here. ... and, erm it getting a little bit annoying now. Because, I doh think we have disorder in this class and I am getting a little bit, erm, a little bit annoyed at the fact that you all know the rules, and you all are still *(pause)* ...

S: Breaking it

T: *(continuing)* breaking it. Very good. Okay. Now remember, if you have something to say...

S: Put up your hand.

S: Put up your hand.

T: *(sarcastically)* Oh, both of you know? Raise your hand, wait till I point to you, and then answer me. You don't go shouting at me. I know that you are excited at the pictures, and I am excited too, but remember, I only have two ears. So speak quietly, okay. Right. Let's go back to the picture of the human skeleton there. What's a human skeleton?

S: The bones in our body.

T: The bones in our body.

Ss: Miss, miss. *(loudly)*

T: *(pauses and looks sternly at them)*. Yes, now, let's tack back a bit, go back a bit. My friend here told me that the skeleton helps us keep our shape. Okay, why do we need to keep our shape?

S: *(beginning to respond loudly)* Miss...

T: Don't shout at me again.

The teacher conveyed her annoyance about what was happening and clearly indicated that students' talk created "disorder" by "breaking the rules." She

emphasized expected procedures: “Put up your hand. Wait till I point to you, and then answer me.” The manner in which they were expected to talk was also specified: “Speak quietly.” When the lesson continued and they began to answer loudly, the teacher once again reined in their animated responses. It was perhaps ironic that, in this class, students usually exhibited high levels of interest and participation. Their enthusiasm frequently resulted in much discussion and talk which breached the limits set by the teacher, who seemed to act on the basis of her habitus. From one perspective, students’ desire to elaborate on their responses possibly created a dilemma for the teacher, whose concern was to cover a specific amount of content in a limited period of time.

In a post-lesson discussion on the lesson, Ms. Bajnath indicated that she did not think differences between the language of instruction and students’ first language created significant difficulties for her learners. She thought her greatest challenge came more from “controlling their behavior” than from making herself understood. She spoke about their “energy” and thought them “hyperactive.” When she was suddenly transferred from the school and another teacher assumed duties with the class, the level of conflict between teacher and students over this aspect of their classroom behavior was not as high, though there were areas of similarity. This led me to conclude that Ms. Bajnath’s responses and attitude must be understood in light of her personal history and experiences, as well as within the context of her practice in the wider society where the language and culture of different groups were valued differently. Her attitude and dispositions were similarly apparent in the next episode with the same class in mathematics.

Illustrative episode 4 – Color your shape

In a lesson on fractions, the following excerpt was recorded in my field notes:

[Teacher] instructed them to take the distributed shapes and fold in exactly over the other part. She encouraged them to check their peers to determine whether they followed instructions. Students formed groups and compared their shapes. They then were instructed to take the circle and do the same thing. She questioned them about the folded circle. She asked them to state what they observed. Students shouted various responses: “Miss a half a circle; a semi-circle; mine like a house; mine like a butterfly; a semicircle; a half a circle; an ice-cream cone; a raindrop.” (They call out different responses in quick succession).

The teacher then held up the shape of the heart, and another shape. The classroom climate shifted from relaxed to tense as the noise level increased with students consulting with each other and comparing shapes. The teacher instructed students to color one side of the shape. She walked around and urged students to color quickly. (It seemed that she was attempting to have them expend energy and focus on a single task. Her tone became more authoritative).

The students continued to color furiously at the teacher's urging and periodically held their colored shapes up for her inspection and approval. T said, "Put coloring pencils down. Sit up." She then colored a sample held against the board and asked class what they noticed. One said that it formed a "next shape"; another responded that the two were the same. The teacher asked how many were formed that were the same, but students did not respond. She repeated the question and a student replied "two."

In response to perceived "noise," the teacher urged students to color their shapes to keep them engaged. This succeeded in silencing the students, who became absorbed in vigorous activity. The teacher's response to an increasing level of student talk was to assume an authoritative stance from which she issued short, precise instructions for students to follow procedures to accomplish a task. The students were effectively silenced and were slow to respond to subsequent teacher questioning. They were, however, eager to obtain the teacher's approval of the models they had worked on during the lesson, and were pleased when she praised samples held up for her inspection. Inequity in status of teacher and students was quite evident in this episode and when increased student talk appeared to threaten teacher control, like the "hands up, hands out" routine previously employed, the coloring strategy regained some measure of control and silence.

Both Episode 3 and Episode 4 show how teacher language establishes the discursive patterns in the classroom. Depending on the dispositions of the teacher, the quantity and quality of student engagement with classroom discourse can be encouraged or restricted. Furthermore, teacher language shows direct and indirect links to other aspects of pedagogical practice; in this case, language is used as an instrument for classroom control.

Illustrative Episode 5 – Questioning, explaining, and codeshifting

At the highest class level, Standard 4, classroom discourse was most dominated by teacher talk. The style of teacher explanation and questioning often exhibited the same complexity as the other classroom texts that students had to negotiate in their lessons. Many questions were simple, e.g., display questions such as: "How many millilitres in a litre?" In some sequences, Ms. Ramlogan posed multiple questions in one turn. When students seemed not to understand the line of questioning, they remained silent. At times, even when they offered a response, they did so in a soft, tentative tone of voice. Their silence or incorrect responses were often taken to mean that they either were not listening, or were not thinking.

In one lesson on the strand Measurement in mathematics, the language that the teacher used to explain how to work with different units of measurement in mathematics revealed an interesting use of terms, some of which students appeared to have internalized.

T: The same way when we are going to do addition and subtraction of litres and millilitres, we are going to look at that same idea, right. How many millilitres in a litre?

Ss: (*together*) 1000.

T: Right, so when you come to add our millilitres column, right, we are going to see, anytime we get more than a thousand, what are we going to do?

Some Ss: Convert it.

T: Convert it to ... litres

Ss: Litres (*said simultaneously with T*).

T: **Take it across** to the litres column. In your litre column, every thousand millilitre is going to be how much litres?

Ss: One litre.

T: One litre, right. And in the same way, now I want you to think. I want your brain to start thinking. When we are **doing subtraction** now, right, and we are subtracting, and let's say **we reach up to thousand**, right, we reach up to thousand and we **subtracting by the hundreds** and **we want a hundred**, what do we do?

S: Take a hundred...

T: Wait, we subtracting thousand, hundreds, tens, and ones and we **reach onto** the hundreds column, but we don't have enough hundreds in the column, what do we do?

S: We go to the thousand column.

T: And we **go to the** (*slight pause*) **thousand column**. And when we go to the thousand column, how much are we borrowing? Are we borrowing one? What in fact are we borrowing?

S: A thousand

T: One (*stressed*) thousand. We are borrowing a thousand (*stressed*), and **we are taking it across to the hundreds column**, right. In the same way, when we are doing subtraction (*stressed*) of the litres and millilitres, we are going to be looking at that same procedure. So we have to be thinking. Are we going to **be borrowing a 1** from a litre to bring it to the millilitres?

Ss: (*Mixed responses as some students say "yes" and some say "no"*)

The use of informal vocabulary in this lesson indicated a use of language that was either specific to this teacher or the school context and which was used to explain how to work with units or values to perform this procedure in mathematics. In this case, common verbs that students would ordinarily use in other contexts were applied in relation to mathematical concepts to follow procedures. Table 1 lists some of those terms that were identified in the episode, and my interpretation of each one in the context in which it was used by the teacher.

In some cases, ellipsis was a textual feature of the teacher's speech when words were omitted from speech with the expectation that they were easily retrievable from the context, for example, "reach up to...". It can also be difficult for

listeners to identify the referents of pronouns such as “it” and “that” in oral communication. Given the multiplicity of terms, the grammatical structures, textual features, and subject content used with different modes of representation such as written texts and graphic representations, the challenges of constructing meaning from oral text is a complex process. Teachers need to understand how such language components work together to enable or inhibit student understanding of oral discourse in content areas, and ultimately their learning. On this occasion, students were expected to understand that, in some contexts, “1” represented many; therefore conversions had to be made. Few students were confident at this stage to volunteer responses when the incorrect procedure seemed to be validated by their teacher in a move that tested students’ certainty in their knowledge of mathematical procedures.

At this class level, students were more tentative and timid in their responses when compared to their younger peers in Infants and Standard 1. There were hardly any verbal clashes between teacher and students with respect to the level of noise generated by eagerness to respond or animated discussion. In fact, students seemed to have been schooled into silence and scarcely took risks for fear that their answers were incorrect. Their short responses contrasted with the extended teacher utterances throughout the lessons observed.

Term used	Meaning in context
Take it across	Move the value across to the other column
Doing subtraction/addition	Subtracting/taking away one value from another
Reach up to/onto ...	Reach the limit of ...
Want a hundred	Want one hundred units
Go to the thousand column	Go to the column with units of a thousand
How much we borrowing/borrowing a 1	How much we are taking from another unit column/Taking one unit from another column
Bring it to ...	Add the value of the units taken from one unit column to another column
Taking it across to the hundreds column	Add the value of the units taken from a column to the column with units of a hundred
Bring it to the millilitres	Add the value of the units taken from another column to the units of a millilitre

Table 1. Terms used by teacher in a mathematics lesson – Standard 4

Illustrative episode 6 –Who eats and who is eaten

Presenting concepts in science sometimes meant that teachers used grammatical patterns that contrasted with those used in students’ vernacular to express relationships. In this episode from a Standard 4 lesson on Food Webs, teacher language reflected morphosyntactic differences between Standard English and Trinidad English Creole when she explained a key concept. Students initially had difficulty understanding teacher explanation of a food web. Part of the difficulty

stemmed from the use of the phrases “eats” and “is eaten by” to describe the relationship between different animals and things in the food web.

At the start of the lesson, Ms. Ramlogan asked students to describe what they were seeing on page 66 of their textbook, which showed a picture of a food web. She questioned them on several aspects of the diagram to elicit their understanding, focusing specifically on the direction of the arrow and inviting comparison of the shape of the arrow in a food web to its shape in a food chain. She asked students to describe what was happening in the diagram they were viewing. Through questioning, the teacher sought to elicit what the arrow represented, as well as the students’ understanding of the relationship between the animals depicted in the diagram, and whether students knew the different parts of the arrow such as the head. The teacher continued to question students and when she received several incorrect responses, she drew the following diagram on the board:

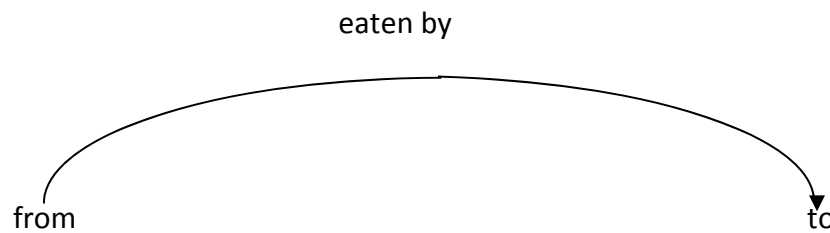


Figure 1. Graphic used in a science lesson on Food Webs – Standard 4

She then elicited from students what the arrow represented, and established the relationship between the two animals in terms of those who ate and those who were eaten:

S: The fish **is eaten by** the kingfisher.

T: How many things eat the fish?

(Some students said one and some said two).

The teacher added to the diagram already drawn on the board and continued the lesson.

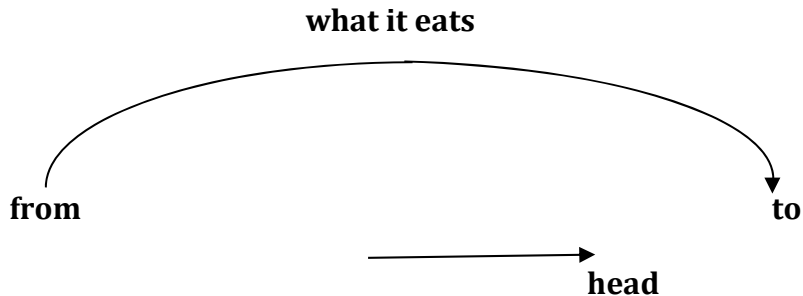


Figure 2. Developed graphic used with teacher explanation – Standard 4

T: What do you call this part (*pointing to the head of the arrow*)?

S: The pointy part

S: The head

(*The teacher wrote “head” on the board and told students that it was called the head*).

T: What else **eats** the fish?

(*Students are silent*)

T: Anything else?

S: The insect **eat** the fish.

One student responded and again confused “eats” and “is eaten by,” and the teacher wrote under the diagram on the board:

“The insect eat the fish”

“The insect eaten by the fish”

She then made the difference between “eat” and “eaten by” a teaching point of the lesson. Here it was evident that the passive expression *is eaten by* challenged some students and the teacher responded with a minilesson because the term was so central to understanding the concept of a food web. She asked the class if there was a difference between “eats” and “is eaten by.” Then she called a student to read the sentences and match them to the arrows that symbolized the two meanings. Some time was spent discussing, matching, and verbalizing so that students would grasp the concept. The structure “is eaten by” is a passive construction that is not commonly used in students’ vernacular. Comparable Creole structures that students might use to convey similar meaning would be “does eat” for habitual action, and “does get eat by” for the passive construction. The fact that the SE structure must be matched by an arrow moving in a specific direction means that students must understand the grammatical structure in relation to a graphic representation to correctly convey the meaning in science. The situation thus required the teacher to consider the language of students to help them attain the concepts that were central to the lesson. In this case, Ms. Ramlogan recognized a difficulty, and spent some time giving her students the language practice they needed. However, this was not done with reference to their vernacular, which is useful in this context since research in Caribbean English Creole has highlighted the difficulties created by the overlap in the lexicons of Caribbean English Creole and Standard English (Craig, 2006; Simmons-MacDonald, 2004). This necessitates teacher knowledge of how the language systems differ.

Another important aspect of teacher language in this lesson was the degree of lexical and conceptual density in short segments of the lesson. Table 2 lists some of the terms students had to transact in order to understand the concept that was being taught. The teacher initially reviewed some of the terms and expressions,

since students had encountered them in previous lessons, but others were new and students had to develop concepts for them in order to understand food webs. Teacher explanations accompanied visual or graphic representations to symbolize relationships between and among plants and animals in a food web, and words—verb constructions and prepositions—were required to match the direction of the arrows used to indicate how the plants and animals were interconnected.

Terms/Expressions
Eats/is eaten by
Food chain
Food web
Arrow head
Diversify
Interconnected
Habitat
Relationship

Table 2. List of terms and expressions in a Standard 4 science lesson

Students were supported throughout the lesson with other vocabulary items that were not specific to science. For example, when they had problems reading aloud the note she had written on the board, the teacher identified the terms they had difficulty pronouncing, underlined them and had students repeat the word. She challenged them to give the meaning and treated the word in the context of the note written on the board. In this way, teacher oral language supported student understanding of subject content.

Discussion and Recommendations

This study sought first, to uncover the role that teacher language plays in shaping students' learning environment, and second, to identify the ways in which teacher awareness of language use can fashion facilitative learning environments. Examination of teacher oral classroom language provided evidence of the use of terminology of the registers of mathematics and science with the potential to both build and challenge students' understanding. The degree to which students derive meaning would depend on whether

- the terms or structures are new to students;
- students previously heard the terms or structures, but are unaware of the precise meaning;
- terms or structures are similar in form but different in meaning to those used in students' vernacular; or
- terms or structures are similar in form and meaning to those used in students' vernacular.

If terms or structures in school disciplines are similar in both form and meaning to those in students' first language or dialect, then learners possess the

linguistic capital to negotiate content easier than if this was not the case (Zevenbergen & Gates, 1998). In addition, teacher oral language can be linguistically and conceptually complex. It would be difficult for listeners to arrive at the interpretation intended by the teacher if they are not equipped with the resources to do so. It therefore requires teacher awareness of pertinent comprehension processes. In this regard, teachers' oral language can either facilitate or inhibit student comprehension and so constitute a positive or negative factor in their learning environment.

In the current study, there were few recorded instances of teachers rebuking students for the use of their vernacular in the classroom. This contrasts with previous research in Caribbean sociolinguistic complexes, for example Carrington (1990), which drew attention to the consequences of negative attitudes to the use of Creole in the classroom. However, teachers sometimes praised students for their use of SE. On some occasions teachers switched codes and used Creole to rebuke students.

Teachers spoke from a position of authority and power socially vested in them to organize instruction, and this established the tenor or relationship of participants in classroom interaction. Teachers expected specific patterns of student behavior, and their speech, as other aspects of their pedagogic practice, reflected their dispositions, values, experience and training. Grenfell (2003, p. 11) cited an observation from Vandenberg (1974) that "authority is involved in every pedagogic relation." Grenfell added that authority is constituted within a field and is expressed and impacts on individual habitus, taken as internalized attitudes and routinized behaviors (Bourdieu, 1977). These in effect determine how teachers communicated when they attempted to fulfill their roles as teachers. In the context of the study, the habitus of teachers was fashioned by individual history and experiences in a society with a colonial past, and which valued specific cultural practices over others. The classroom is a subset of the field of education in which teachers conduct their practice and exhibit their professional habitus. As part of this practice, their oral language in the classroom supported or challenged student understanding and participation in classroom discourse. In addition, entrenched discursive patterns of classroom discourse, marked by dominant teacher talk, can give students little sense of agency or of the way things are done and expressed (Wagner, 2007). In one episode in the study, the teacher, perhaps unconsciously, through the use of pronouns positioned the learners as responders to an absent third party. In other episodes, students responded to teacher questioning with silence. One of the ways in which this can be interpreted is as evidence that they excluded themselves or were excluded from classroom discourse.

Based on the findings, it would be useful for educators to record instances of their oral language use in the classroom to discover what it reveals about their assumptions, dispositions, and pedagogic practice. The information can be further analyzed to ascertain features that promote or inhibit students' learning. Grenfell (2003) suggested that the process of self-examination can help to make teachers sensitive to mechanisms of exclusions and inclusions inherent in teacher

pedagogical discourse, and which permit teachers' "unknowing collusion" in constructing environments that contribute to student failure. Focused and informed reflection on practice therefore has the potential to increase teacher level of consciousness about classroom language, and increase knowledge as a basis for action. Thus, educators need to closely examine classroom processes to understand how oral language functions, especially in a context where students' language and ways of speaking are not valued in schools. Although language attitude and behavior can be very resistant to change, a major requirement for informed teacher practice is recognition and understanding through increased awareness of the linguistic, social, and psychological factors that are significant in classroom discourse. The following can constitute the focus of action research.

Category	Reflective questions
Linguistic	<ul style="list-style-type: none"> • <i>What aspects of my language reflect the register of the discipline I teach?</i> • <i>How accurately does my speech reflect language use in the specific content area?</i> • <i>What is the degree of linguistic complexity of my classroom speech?</i> • <i>What textual features of my speech appear to be challenging for learners?</i> • <i>How does my language contrast with that of my learners?</i> • <i>What opportunities do I give for students' language growth?</i> • <i>What roles do I assign to language varieties in the classroom?</i>
Social/Interactional	<ul style="list-style-type: none"> • <i>What speaking boundaries do I set for my learners?</i> • <i>How do I use language as an instrument for control?</i> • <i>How does my language help to position my students and myself in classroom discourse?</i> • <i>What is the pattern of teacher-student interaction in my classroom?</i>
Psychological/Attitudinal	<ul style="list-style-type: none"> • <i>How does my language influence classroom climate?</i> • <i>What does my language reveal about my attitude to language varieties in the classroom?</i>

Table 3. Questions for reflective practice in three categories

As I suggest in Table 3, teachers can investigate their oral language use along three dimensions: linguistic, social/interactional and psychological/attitudinal. They should be interested in the extent to which their language use accurately and appropriately reflects the registers of school disciplines. Subjects such as mathematics and science use multiple semiotic systems that students must learn to negotiate if they are to be successful (Fang & Schleppegrell, 2010; Lager, 2006; Nagy & Townsend, 2012; Schleppegrell, 2007). In addition, teachers serve as models for students and accurate subject-specific language use requires a degree of awareness and use of that information to construct learning environments that would allow learners to acquire the linguistic capital necessary to learn content (Zwiers, 2007). Although teachers sometimes use informal language to make content more comprehensible to students, such use where technical, subject-specific language is

required could limit students' access to disciplinary registers and negatively affect student learning (Ernst-Slavit & Mason, 2011).

Self-analysis aimed at increasing awareness of language use can further help teachers to recognize the complexity of texts in content areas, and be sensitive to the demands placed on students' comprehension of oral texts. Processing information while listening requires different comprehension strategies from those required when reading or viewing graphic representations. To aid students' comprehension, Moje, Collazo, Carillo, & Marx (2001) recommend that teachers carefully select their "tools of expression" (p. 5) and recognize the multiplicity of discourses that compete in the classroom; among them, the discourse of the subject, of instruction, and of everyday life. This is an area that requires much more research to fully understand the way learners negotiate different texts in the classroom.

The tenor or relationship of participants in classroom discourse is inherently unequal. From a Bourdieuan perspective, the linguistic capital that teachers possess is not necessarily shared by students, who also have unequal access to language in school disciplines. This includes both form and discursive practices, many of which, like Initiation-Response-Feedback (IRF), are highly routinized (Zevenbergen & Gates, 1998). The IRF structure of classroom interaction allows teachers to control the dialogue and social interactions in the classroom. This can restrict meaningful student participation in classroom discourse by decreasing opportunities for students to elaborate and explain their answers. Teachers also wield the power to direct activities and determine who speaks, when, and for how long. In this way, teachers manage classroom discourse, and teacher language affects the quantity and quality of student talk. More teacher talk results in less time for student talk, and, as Wagner (2007) observed, students have less control over the discursive systems in their classrooms. Teacher investigation of context can reveal how such systems are organized in classrooms, with a view to amending practice to ensure that students have greater opportunities to express themselves. In addition, styles of explanation and questioning need to be examined. For example, open and closed questions elicit different types of responses from students. Safford & Kelly (2010) suggested as well that there are significant differences in styles, manners and rhetorical devices that serve as instruments to impose the official language. Reflective inquiry to improve practice can help bring greater clarity to these issues.

Conclusion

This paper addressed the relationship between teacher oral language use and students' learning environment in mathematics and science to answer two questions. The first concerned the role of teacher oral language in shaping students' learning environment. The second focused on the issue of increasing awareness of language use to promote enabling learning environments. Examination of six illustrative teaching-learning episodes and findings of other classroom language research suggest that interpersonal and social aspects of communication are as important as linguistic ones. Individual or collaborative teacher inquiry can focus on the way teacher language can act as a model for learners and increase their access to

academic language. Teachers can also discover how language reflects their attitude and assumptions, and link to their pedagogic practice. All have a role in constructing the environment in the classroom. While the research was conducted in a Caribbean Creole context, the findings and recommendations for teacher practice have relevance for international educational settings since they can enable teacher professional growth, and help teacher educators sensitize prospective teachers to the importance of language in creating facilitative learning environments in content areas.

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Co-constructing a Student-Led Discussion: Students' and Teachers' Talk in a Democratic Classroom

Beth Buchholz

Abstract

While previous research has identified discourse practices beyond IRE in which students and teachers can engage during student-led literature-based discussions, little research has examined how young children discuss issues of interest outside of a literature discussion model. This ethnographic study conducted in a local a public elementary school tracks students' and teachers' navigation practices and contributions during weekly "student-led" discussions to better understand issues of intellectual agency and authority within democratic classrooms. The research question is how does a group of multiage students and their teachers construct and navigate democratic, student-led discussions? Subquestions are 1) What practices do students engage in during the discussions? (2) What practices do teachers engage in during the discussions? (3) What ideas are introduced, explored, and examined during the discussions?

Introduction/Statement of Research

In this ethnography, I explore one unique classroom located in a local public school. Readers will walk into Rooms 1 and 2 at a local public elementary school to see how two teachers and 57 students (ages 5 to 12 years old) are able to co-construct a democratic learning community. In this current era of standardization, it is often implied that schools are institutions where teachers impart certain knowledge and skills (determined by the state and/or federal government) to students, and the main goal of elementary school is to ensure that students are "proficient" in reading, writing, and math as measured by a multiple choice test. Dewey (1916) would be disappointed by our increasingly limited view on the goals of schools. As he pointed out nearly 100 years ago: "The notion that the 'essentials' of elementary education are the three R's mechanically treated, is based upon ignorance of the essentials needed for realization of democratic ideals" (p. 200).

While educational leaders and politicians may use the rhetoric of democracy to idealize the work of schools in our country, the reality is that "schools have been remarkably undemocratic institutions" (Apple & Beane, 2007, p. 13). For teachers who feel pressured by the increasingly standardized curriculum that encourages a "banking" (Freire, 1997) model of education, this ethnography gives voice to an alternative kind of learning space and knowledge production—one where teachers and students work together through the messy (and ambitious) work of co-constructing a democratic classroom.

Literature Review

Language is an integral part of what occurs in classrooms daily between students and teachers. However, there is little consensus about what *role* language plays—or should play—in teaching and learning. Some of the earliest research examining talk in classrooms (Bellack, 1966; Mehan, 1979) found a predictable pattern of teacher and student interaction. It was described as teacher **I**nitiation, student **R**esponse, typically followed by teacher **E**valuation (IRE). Following a teacher’s question, students raise their hands to “bid” for speaking time. The teacher calls on a student who is permitted to talk until the teacher takes the floor again. Often the teacher evaluates the student’s response before initiating the next IRE cycle. IRE remains one of the most common discourse patterns found in 21st century classrooms. Wells (1999) argues that this points to the pervasive assumption in education that children are unable to construct useful or valid knowledge if it does not come from the teacher or is at least given a “stamp of official approval” (p. 145). This reflects the empiricist paradigm of knowledge where individuals “receive” verified knowledge from an expert. Cazden (2001) calls IRE the “default pattern—what happens unless deliberative action is taken to achieve some other alternative” (p. 53).

An alternative discourse pattern that is possible in classrooms is a discussion-based, dialogic model of learning (Wells, 1999). Burbules (1993) defined discussion as a type of dialogue where questions, responses, redirections, and building statements are woven together in a developmental sequence. Within the broad term *discussion*, Parker (2006) delineates two purposeful classroom discourse structures: seminar and deliberation. These vary in terms of *what* is being shared and *why*, but also with *whom*. The goal of a seminar discussion is to reach an “enlarged understanding” of a text or issue, while deliberation aims to reach a consensus about what should be done about a shared problem (p. 13). In both discourse structures, students must develop the sort of political friendship that allows for a “culture of argument” in the classroom (Walzer, 2004, p. 107). While teachers often attempt to minimize argument and conflict, especially in elementary classrooms, it is the tools of effective argument that are the basis for participating in a democratic society (Parker, 2006).

Children come to school with a variety of everyday discourses acquired through participation in their family life (e.g., storytelling, sharing information, arguing with siblings) that are elaborated and expanded upon according to the practices that are valued in school, peer culture, academic disciplines, and professions. Education is primarily a process of mastering new discourses (Applebee, 1996); as students move through school, discourses become increasingly formalized. Each discourse offers children a set of cultural tools for making sense of and sharing ideas and experiences: “These [discourses] include not just concepts and associated vocabulary, but the rhetorical structures ... [and] the patterns of action” (p. 9). The participatory nature of democracy requires that students learn the complex discourses of discussion, critique, and argument. These discourses must be learned through *participating* in a community that values discussion as a cultural tool for understanding and producing collective knowledge (Applebee,

1996). Democratic citizenship is a matter of competence for participation and voice, and public schools are especially powerful locations for discussion to occur because they are often the most diverse communities in which children [and adults] find themselves (Parker, 2006).

Researchers have long raised questions concerning how schools and teachers might best support students in the lofty goal of becoming democratic citizens. The evolving conversations about democratic aims in classrooms have been rooted in the larger educational discourse, in which Rogoff, Turkkanis, and Bartlett (2001) suggest a sort of swinging pendulum has long been at work: moving back and forth between “adult control of learning” and “children’s freedom to discover” (p. 6). However, in Mayer’s (2012) recent book, *Classroom Discourse and Democracy: Making Meaning Together*, she argues that this dichotomy of “adult control” versus “children’s freedom” (p. 2) is not helpful when considering the roles teachers need to take on in classrooms. She describes democratic classrooms as “interpretive communities”: groups of people dedicated to working together to make sense of the world. Mayer identifies three types of learning structures that teachers must learn to orchestrate within their classrooms: student-led, co-led, and teacher-led. She posits that by learning to appreciate both the affordances and constraints of each form of talk, teachers will have a better understanding of when each is called for in the process of apprenticing children into the effective use democratic discourses and practices.

Teacher-led, co-led, and student-led negotiations of meaning are defined according “to the extent of ‘interpretive authority’ that is granted to students” (Mayer, 2012, p. 9). In this paper, I focus on what I argue is a student-led discussion, which Mayer describes as a structure where students have greater intellectual authority and more space or time to collectively build knowledge with peers. Even with the student-led structure, teachers are still challenged to “orchestrate” the talk in subtle and nuanced ways. Teachers may “revoice” what a student has said, but they explicitly withhold offering specific claims or evaluating student responses. This last part, evaluating students, has been especially difficult for teachers to let go of given that the IRE pattern of talk has become the default in most classrooms. Integrating student-led discourse into classrooms is critical because democratic learning communities are “charged with the responsibility of constructing understandings in relation to students’ personal understandings and to those of the broader culture” (p. 8).

While previous research has identified navigational practices (beyond IRE) in which students and teachers can engage during student-led literature-based discussions, little research has examined how young children discuss issues of interest outside of a literature discussion model. Research is needed to explore how children navigate difference during discussion and how teachers and students work together to collectively construct knowledge in a democratic classroom.

Theoretical Framework

Beliefs about the role of language in education are deeply connected to ways in which knowledge itself is conceived (Wells, 1999). In the empiricist paradigm, the goal of education is to ensure that *individual* students acquire empirically verified knowledge that is considered most useful and important. This perspective is contrasted with sociocultural theorists like Vygotsky (1978) who view knowledge as constantly *constructed* and *reconstructed* between participants in specific situated activities, and learning as intimately connected to students' social participation in the community around them. Regarding the use of talk in classrooms, Mercer (2004) observed, "A sociocultural perspective highlights the possibility that educational success and failure may be explained by the quality of educational *dialogue*, rather than simply considering the capability of *individual* students or the skill of their teachers" (p. 139; italics added).

In this paper I explore classroom talk from a sociocultural perspective, looking closely at the role of language in connection to knowledge production at my field site. Interactional patterns between students and teachers are emphasized as I come to better understand how ideas are constructed and reconstructed during the course of classroom discussions.

Overview of Project

This paper draws on data from a larger, long-term ethnographic study (Lincoln & Guba, 1985) exploring literacy learning and interactions in a multiage classroom. The study was conducted at a preK–6th grade public school in a medium-sized, Midwestern university town. As a participant-observer, I collected data one morning a week (approximately three hours) for three months. I recorded whole-class and small-group talk during classroom literacy engagements using thick field notes and audio recordings. IRB approval was obtained for data collection in this classroom. As part of the protocol for ensuring confidentiality for all participants, pseudonyms have been used for the students and teachers.

In this paper, I focus on a subset of the data collected: "student-led" whole class discussions that occurred each Thursday morning. Given the dominance of IRE-structured talk in classrooms, student-led discussions offer a unique opportunity to look at students' and teachers' discourse practices during the process of collective knowledge building. As noted in the literature review, democratic classrooms do not just happen; they result from "explicit attempts by educators to put in place arrangements and opportunities that will bring democracy to life" (Apple & Beane, 2007, p. 9). This study tracks students' and teachers' practices and contributions during a discussion to better understand issues of intellectual agency and authority within democratic classrooms. The research question is how does a group of multiage students and their teachers construct and navigate democratic, student-led discussions? Subquestions are 1) What practices do students engage in during the discussions? (2) What practices do teachers engage in during the discussions? (3) What ideas are introduced, explored, and examined during the discussions?

Participants

Participants were 57 students in a multiage classroom and two classroom teachers (Robin and Kirk). Students ranged in age from kindergarten to sixth grade (see Table 1 for a breakdown of student participants by grade level). Of the 57 students in the class, 50 identified as European- American, 4 identified as multiracial, 2 identified as African-American, and 1 identified as Latina. Over 70% of students at this school were eligible to receive free or reduced lunch. Five students were identified as receiving special education services. Robin and Kirk had co-taught in the K–6 multiage classroom for the previous eleven years.

Setting

Robin and Kirk’s physical classroom space consisted of two classrooms (Rooms 1 and 2) connected by a small teacher office area that was converted into a “library” and quiet reading room for students, complete with comfortable beanbag chairs, pillows, and a large overstuffed chair. This space was used so students could move fluidly between the two rooms without going into the hallway. Room 1 was arranged with enough tables and chairs for all students to be seated at one time while Room 2 was organized in such a way as to provide ample floor space for all participants to sit in a large circle. Both classrooms had lamps scattered throughout; the overhead florescent lights were often turned off so that only the lamps and natural light from the windows lit up the space. Students’ artwork filled the walls, providing a record students’ and teachers’ work together.

Data Collection

Robin and Kirk considered “student talk” to be an integral component of the learning across all subjects areas. Talk took on a variety of forms in this multiage classroom—from the informal, natural “talk” that regularly occurred between students engaged in reading and writing activities to more formalized routines like whole-class meetings, small group literature circles, and student inquiry presentations. Within any of these activities, talk ranged on a continuum from teacher-led to student-led.

One routine in which students and teachers in this multiage class regularly engaged each morning was a whole class meeting (Kriete, 1999; Yeager & Silva, 2002). “Every Thursday [when the data selected for this paper were collected], instead of students sharing personal stories, the entire class participated in a democratic discussion that participants collectively referred to as “What’s On My Mind” [WOMM]. A basket in the classroom labeled with the acronym WOMM was used throughout the week to collect topic ideas that students were interested in talking more about with the class. The topics for discussion during WOMM were always initiated by students, and covered classroom, school, community, national,

Figure 1. Grade Levels of Multiage Participants

Grade	Number of students
Kindergarten	5
First	4
Second	5
Third	9
Fourth	12
Fifth	13
Sixth	9
Total	57

Table 1. Participant Breakdown

and world issues. Apple & Beane (2007) identified this kind of student input as a key element of a democratic curriculum, arguing that classrooms must “not only [include] what adults think important, but also the questions and concerns that young people have about themselves and their world” (p. 17). WOMM discussions offered the longest consecutive stretches of student-led talk during my observations.

Eight WOMM discussions were observed as part of a larger ethnographic study. I audiorecorded each discussion and took “quite thick” field notes including information about students’ gestures, body postures, gaze, and tone of voice (Carspecken, 1996). This reflects my stance that meaning is embodied in nonverbal acts as well as verbal ones. I also recorded my own “observer comments” [OC] during the observation and “reflective thoughts” in a field notebook after leaving the school. Each week I transcribed the audio recordings in great detail, noting emphases, pauses, repetitions, and false starts. My thick field notes and observer comments were inserted into the transcript to provide an expanded and extensive record of the class discussion.

The analytic coding schemes for student and teacher discourse practices were developed using all eight discussions as data sources, but in this paper I focus on the analysis of one specific discussion, for several reasons. First, the time devoted to this particular student-directed discussion (35 minutes) was much longer than “typical” WOMM discussions (15-20 minutes). The length of this meeting affords an extended look at how students navigate and construct knowledge together during WOMM discussions. Second, the topic selected for the meeting proved to be especially generative in terms of the diversity of student contributions and perspectives. Damico & Rosaen (2009) point out that when it comes to class discussion, not all subject matter is equal in terms of its “fluidity and complexity” (p. 1188). Some questions or topics have commonly accepted ideas and facts that can make a generative discussion more difficult.

WOMM Topic Selection

Alexis, a fourth grade African American student, submitted the topic “Arizona Laws” earlier in the week and opened up the conversation Thursday morning by giving background information about the topic to other students:

[44] Alexis: *Well, a lot of people have heard of the different laws that people in Arizona are passing and that people in Arizona are trying to pass. And um, I just kind of was thinking about all the different laws have passed and all of them haven't but are trying to pass and then all of the ones that haven't passed, but most of them have. So I just wanted to kind of talk about the different kinds of laws and how they're kind of ... and I don't understand why they would want these laws.*

[46] Alexis: *Well ... for example, the law in Arizona where for example if you're Latino or if [you] look like you're from Mexico or Africa or something they'll pull you over and they'll say you need blah blah blah birth certificate to show*

that you were born in America and that you're not an illegal immigrant. Cause also I have some family there, but, it's kind of really weird ... and ... and I also heard that they were trying to pass that law in Indiana. And I hope that doesn't happen for everyone else here, but then even if it does happen I'm kind of happy, I mean I don't want to leave, but ... I mean even if it does happen here that would kind of make me want to leave more.

After this brief overview of the topic, Alexis became the “leader” of the WOMM conversation (i.e., the discussion moved from being teacher-led to student-led). She had the responsibility of calling on other participants with their hands raised to share ideas, comments, and questions. This WOMM discussion format backgrounded the traditional role of teachers as being “in charge” (teacher-led) and foregrounded students as actively constructing knowledge through exploratory talk (student-led).

It is important here to situate Alexis’s proposed WOMM topic and the eventual whole-class conversation that occurred in the classroom at the end of February 2011 within state and national conversations that were simultaneously being played out in the media that month. In the days preceding this conversation, an Arizona state senator had proposed legislation that would deny children of undocumented immigrants the right to attend K-12 public schools in Arizona, and would also deny citizenship to children born in the United States to illegal immigrant parents. On a more local level, the Indiana State Senate passed an anti-immigration bill that echoed Arizona’s efforts two days prior to the WOMM discussion.

Data Analysis

A “turn at talk” was used as the unit of analysis, and was defined as a speaker’s uninterrupted sequence of utterances, no matter how many or few. The 227 turns at talk in the “Arizona Laws” WOMM discussion were first coded according to basic descriptive information about participants (e.g., student or teacher, grade level, ethnicity).

Emergent coding schemes were developed to identify student and teacher navigational practices. When analyzing a turn at talk, my long-term engagement in the classroom as a participant-observer augmented the coding process. Observing students’ and teachers’ discourse patterns across different parts of the school day fostered a deeper appreciation of subtleties in the transcripts. I was able to triangulate the findings obtained through the qualitative coding process with my extensive field notes and informal interviews collected in the months preceding this discussion. My extended ethnographic work in this classroom afforded me comprehensive knowledge of each participant, which supported the validity of the coding process.

Coding Student Navigation Practices

While the foundational IRE sequence has long served as a conceptual cornerstone for generative analyses of classroom talk, Mayer (2012) argues that “it cannot support a comprehensive exploration of the issue of intellectual agency and authority with democratic classrooms.” (p.135). In an attempt to build on previous work in the field, I began the coding process by identifying more complex coding schemes that researchers have previously used to analyze complex student talk.

The initial codes for student navigation practices came from the work of Damico (2009), who identified three types of student navigation practices used in a fifth grade whole class discussion: (1) asking questions, (2) disagreeing or expressing conflicting viewpoints (referring explicitly to each other), and (3) offering a meta-analysis. In Damico’s case study, the teacher took on a more prominent role of facilitating the discussion (co-led or teacher-led), which contrasts with the WOMM discussion structure (student-led) analyzed in this paper. The distinct context for this paper required that additional codes be identified for student navigation practices. Damico’s coding scheme was extended by using Orsolini and Pontecorvo’s (1992) codes for young children engaged in small- and large-group discussions, and Mercer’s (2004) six features of explanatory talk. After a long process of merging and revising the final set of codes, it was possible for a student’s turn at talk to be coded with more than one navigation practice.

Table 2. Coding for Students Navigation Practices

Code	Navigation Practice	Explanation
Q	Asking <u>questions</u> <i>[Following a questioning taxonomy suggested by Saha (1984) & used by van Zee & Minstrell, 1997]</i>	Utterances that begin with interrogative words, such as what, where, when, why, who; begin with a verb (e.g., "Do you ...?"); end with a tag (e.g., "..., do you think?"). Also included are more subtle questioning utterances that contain embedded questions (e.g., "I wonder whether ..." or "I don't know why...").
R	Sharing <u>relevant information</u>	A previous telling or a claim produced in a previous response is elaborated on (no explicit, intentional connection to a speaker or idea).
ED	Explicit disagreeing or expressing conflicting viewpoints	Child refers explicitly to a previous speaker or explicitly situates his/her response in opposition to a previous utterance.
EA	Explicit agreeing or expressing additional information in support	Child refers explicitly to a previous speaker or explicitly situates his/her response in support of a previous utterance.
II	Interject a comment, <u>interrupt</u>	Child speaks without being called on. Interrupts a person currently speaking or jumps in as soon as someone else finishes an utterance.

IW	Interject a comment, <u>whisper</u>	Child speaks at same time as current speaker, but whispers utterance so quietly that current speaker cannot hear.
M	Offer a meta-analysis	Child pulls together multiple ideas/viewpoints that have previously been discussed.
CD	Control discourse	Manage a discussion, including reminding discussion participants of ground rules, keeping other students quiet, calling on new speakers, making sure everyone heard the speaker, and clarifying the previous response.
A	Simple Answer	Information requested by a previous speaker is provided but not extended.

Coding Teacher Navigation Practices

Developing codes for teacher practices occurred in much the same recursive way as the codes for student practices. The starting point for teacher navigation codes also came from the work of Damico (2009), and included: (1) Asking questions, (2) Valuing and building on ideas, (3) Treating student questions and ideas as text, (4) Prompting explanatory reasoning, and (5) Incorporating texts in discussion. These were merged with Orsolini and Pontecorvo's (1992) "teacher talk codes." The coding schemes were similar, but the language used by Orsolini and Pontecorvo better explained the navigational moves by teachers when responding to students in the context of a WOMM discussion. Damico's "valuing" and "prompting" codes were merged into "revoicing and rephrasing," with two subcodes nested underneath based on whether the teacher addressed an individual speaker or the whole class.

Two additional teacher navigation codes were added, including "controlling discourse" (for the same reasons discussed in the student navigation section) and "evaluating and critiquing student ideas." The evaluation code was added based on the IRE pattern of student-teacher interactions cited in previous literature. The frequency of teacher "evaluation" of student responses is negatively related to the opportunity for open student participation and "exploratory talk." See Table 3 for further definitions and examples of the coding scheme developed for teacher navigation practices.

Table 3. Codes for Teaching Navigation Practices

Code	Navigation Practice	Explanation
Q	Asking question	See Table 2 for full explanation of the “Asking question” code.
RA	Revoicing & Rephrasing: Information provided by a previous child’s utterance is repeated or rephrased by the teacher and possibly added on to.	(A) Talk addressed to the previous speaker in order to get him/her to continue talking (prompting explanatory reasoning).
RB		(B) Talk addressed to the whole group to underline an item of information introduced by a previous speaker. Sometimes new information is added by the speaker (valuing and building on ideas).
T	Incorporating texts into discussion	Teacher cites a text —a book, article, movie, song, etc.— as a way to help students make connections with current conversation.
E	Evaluating & critiquing student ideas	Teacher offers a critique of student ideas or explicitly corrects a student’s utterance.
CD	Control discourse	Manage a discussion, including reminding discussion participants of ground rules, keeping other students quiet, calling on new speakers, making sure everyone heard the speaker, and clarifying the previous response.

Coding Ideational Content

Exploring the third subquestion, *What ideas are introduced, explored, and examined during the discussion?*, required a more grounded and emergent process of code development than was necessary when looking at navigational practices. The process involved continually and recursively comparing the ideational content shared in each turn at talk (Wilkinson, 1991). In an attempt to truly “hear” what participants were saying, *in vivo* codes were initially applied to each turn; these short phrases were pulled directly from the participants’ responses. In subsequent passes through the data, repeating ideas were identified from the ideational *in vivo* codes.

Once a “repeating idea” was identified, a process of comparative analysis was used to compare each turn at talk in the transcript against those already placed within the conceptual category. Comparative analysis was used until saturation was reached and no new themes emerged. The three main ideational themes that emerged within the WOMM class discussion were 1) Arizona immigration laws, 2) relationship between laws and freedom, and 3) necessity of laws. Each theme had multiple child codes embedded within it (see Table 4 for further definitions and examples of the coding scheme; see Appendix A for a conceptual map of the discussion).

Table 4. Ideational Coding Scheme		
Name of Code	Description of Code	Example from the Transcript
Theme 1: Immigration Laws (Arizona and Indiana)		
Laws can be unfair	There are instances when laws are unfair and inequitable	[224] Vivian: <i>“My problem with this law is that in Arizona it would be hard not to have tan skin because it’s like so hot. Um, and so... also there’s probably a lot of people there because it used to be Mexico...”</i>
Immigration laws don’t make sense in Indiana	Immigration laws make sense in Arizona, but not Indiana	[49] Becca: <i>“I don’t see why they would want to, um, do it in Indiana cause it sort of, it makes sense in Arizona but in Indiana it doesn’t make sense to have that law.”</i>
Theme 2: Relationship between laws and freedom		
Freedom means not having laws	Our freedom is limited by laws that keep the world a safe place to live in; freedom thought of as only existing in the absence of laws	[60] Myles: <i>“And, we’re not really free because we still have laws. And there is freedom of speech and stuff, but you still break the law and the law is there.”</i>
Possible to be “free” <u>and</u> have laws	A nuanced perspective that highlights that freedom and laws can coexist; laws allow us to be “free”	[76] Adam: <i>“Well, just because you have laws doesn’t mean that it’s not a free place ... the point of a free place is that you have freedom, not that you can do whatever you want, so it’s not like if you’re in a free place you can do whatever you want because that would be absolutely horrible.”</i>
Theme 3: Necessity of laws		
We need laws!		
World without laws filled with chaos and fear	A fear-oriented perspective suggesting that laws are necessary to restrict humans’ behavior, which is naturally oriented to “steal” and “kill”	[122] Scott: <i>“Um, I was going to say um if there were no laws people would just be killing each other and killing and, and since there’s no laws there would be no police and they wouldn’t be able to put people in jail.”</i>

Laws allow us to deal with people who break the law	Laws aren't there to restrict behavior, but rather to provide guidelines for how to fairly deal with people who do break laws	[117] Vivian: <i>"Um, the law isn't exactly what's keeping people from killing each other and stealing stuff, it's pretty much just like, laws lets people deal with the people who kill each other and steal stuff."</i>
Laws protect the collective interests of a community	Laws protect community resources that might lost if only individual desires were pursued	[72] Eli: <i>"... if there weren't any laws... like a hundreds of, or parts of history, a lot of, a ton would be just gone because let's say somebody, even though we aren't here, in Italy then big big just buildings could be put up over thousands of artifacts."</i>
We don't need laws!		
People would act the same with or without laws	Human nature is inherently good; humans would act the same with or without laws in place	[192] Sam: <i>"So what I was thinking is that if there was no laws you'd probably just live a normal life ... Because you know everybody wouldn't be like, ok now there's no laws I can steal anything I want."</i>
Communities would work to police themselves even without official laws	Laws aren't necessary for humans to know what is "good" and "bad," humans would protect one another	[158] Alex: <i>"I mean, if someone caused enough problems a billion people would come up and put them into some kind of a jail if there was a law system or not."</i>

Discussion

The weekly WOMM discussions were a valued tradition in this K-6 multiage classroom. In the days leading up to the WOMM discussion, I often heard Robin and Kirk respond to a student's comment or question with some version of the following invitation: "That's so interesting! You should write down that that topic for WOMM so we can talk more about it on Thursday." Teachers worked to get students to understand that all topics/questions could be better understood through a collective and participatory meaning-making process.

Students revealed a diverse web of connections and divergent thinking as the ideational flow of conversation moved from "immigration laws in Arizona" to "the necessity of laws" while touching on complex issues ranging from human nature to historical inequities. If this had been a different classroom where teachers attempted to guide this discussion using IRE to ensure "coverage" of a related state academic social studies standard, many students' contributions would have likely been silenced or redirected. For example, Alex questioned the overall necessity of the government and of laws:

Alex [4th grade]: *"Well when people say, I know a lot [of] people that say if there are no laws there wouldn't be police so people wouldn't have to go to jail."*

I mean, if someone caused enough problems a billion people would come up and put them into some kind of a jail if there was a law system or not. And people forget that if you do something too bad, people are going to react. People act as though no laws means there's no reaction And there was a time when there practically was no laws back in Egypt"

Alex openly challenged other students'—and the state academic standard's—claims that governments are unquestionably necessary. His critique stands in opposition to the way “government” is typically talked about in schools as a “‘truth’ arisen from some immutable, infallible source” (Apple & Beane, 2007, p. 15). Alex used a historical reference to remind students of a time when governments weren't as large and all-powerful as they are today. Although Robin or Kirk could have easily jumped in here to “evaluate” this response by pointing out that ancient Greece is considered the “birthplace of democracy,” they instead remained in the background of the discussion and allowed students to respond to the claim: “in the process of stretching their concepts to find a common ground; as [students] collaborate and argue with others, they consider new alternatives and recast their ideas to communicate or to convince” (Rogoff, 1990, p. 196). In the following two sections I take a closer look at students' and teachers' navigational practices during the discussion and explore how this connects to teachers' aims for co-creating a democratic classroom.

Student Navigation Practices

See Table 5 for an overview of the frequency with which students engaged in particular navigation practices during the WOMM discussion. Although the “sharing relevant information” practice (f=37) occurred most often, looking at the “explicitly agree” (f=12) and “explicitly disagree” (f=23) codes together (f=35) shows that nearly half of the time that students shared ideas (during an approved turn), they were explicitly positioning themselves in relation to previous speakers. This type of talk is specific to academic discourses like discussion and debate, and is not the kind of talk that young children typically use in everyday, informal speech. Children *learn* to talk like this. Even Jonas, one of the youngest students in the class, tried to explicitly position his idea in relation to Sam:

[216] Jonas [kindergarten]: *Um, well, I was saying ... well maybe like Sam was saying ... if there's no laws then like nobody, then everybody would die cause ...*

Student Navigation Practice (code)	Frequency
Sharing relevant information	37
Controlling discourse	32
<i>Controlling discourse (without Alexis)</i>	9
Explicit disagreeing	23
Interject (interrupt)	16
Asking a question	16
Interject (whisper)	13
Explicit agreeing	12
Simple answer	11
Meta-analysis	0

In a multiage classroom such as this, WOMM meetings were a kind of “apprenticeship in thinking” (Rogoff, 1990), offering younger students and new students opportunities to “learn from observing and participating with peers and more skilled members of their society, developing the skills to handle culturally defined problems with available tools” (p. 7). The tools of democratic discourse are practices that students typically have little experience with in their real lives (or in most schools), given that “good” citizenship is complicated by discourses of childhood that situate young learners as innocent, inexperienced, and in need of protection.

In democratic classroom discussions, navigational practices can be viewed as “cultural tools” (Mayer, 2012) that allow knowledge to be collectively constructed. Learning to explicitly agree or disagree with peers requires that students listen to one another in an attempt to understand ideas that are shared. Throughout the conversation, students consistently positioned themselves in relation to previous speakers, which reflected an understanding that democratic discussions are co-constructed by extending, questioning, and critiquing each other’s ideas. In the following turn at talk, Adam offered a critical reading of Tanner’s previous contribution, as well as a critical reading of the world:

[76] Adam [6th grader]: *Well, just because you have laws doesn't mean that it's not a free place. Because if, that doesn't even make sense, because the point of a free place is that you have freedom, not that you can do whatever you want, so it's not like if you're in a free place you can do whatever you want because that would be absolutely horrible. So it's, yes Tanner, we do live in a free state, and that doesn't mean it's not and that doesn't mean it doesn't have issues and*

problems to deal with, but it doesn't mean because just because we have laws that it's not a free place.

Adam validated Tanner by suggesting that “yes ... we do live in free state,” but then went on to explain his divergent opinion about what it means to be “free.” Critique, rather than a tearing down, actually comes to be seen as a “construction of meaning” in the dialogic classroom as learners explore and interrogate multiple stances with the intention of being better able to reject, accept, or revise a stance from an informed position (Fecho, 2011).

Students were very aware (and at times protective) of their interpretive authority during WOMM discussions. This was evident in the initial discourse moves between Alexis (student leader) and Robin (teacher). Alexis began by introducing her topic:

[44] Alexis: *“Well, a lot of people have heard of the different laws that people in Arizona are passing and that people in Arizona are trying to pass. And um, I just kind of was thinking about all the different laws have passed and all of them haven't ... I don't understand why they would want these laws.”*

Robin jumped in here to ask a series of questions, requesting more information about the specific “laws” that Alexis wanted to discuss and asking for clarification. Alexis responded by making a connection between laws passed in Arizona to potential laws being passed in Indiana.

[46] Alexis: *“Well ... for example, the law in Arizona where for example if you're Latino or if look like you're from Mexico or Africa or something they'll pull you over and they'll say you need blah blah blah birth certificate to show that you were born in America and that you're not an illegal immigrant ... and I also heard that they were trying to pass that law in Indiana.”*

[47] Robin: *Because you're already leaving, and you're thinking wow, I'm frustrated with the state of Indiana?*

[48] Alexis: *Yeah.* [Pause as she looks to see whose hands are up.] *Becca and then Myles.*

Alexis made a significant navigational move in turn 48 when she responded to Robin's previous question with a simple answer (“Yeah”) before moving forward with the discussion by calling on students with their hands raised. This navigational decision by Alexis moved the interactional sequence away from the pattern of traditional IRE talk and opened up space for students to construct more dialogic talk through runs of consecutive turns. When students speak immediately after other one another, it is an indicator of greater student control over topic (Chinn et al., 2001). Alexis's move to call on other students marked a navigational turning point in the conversation away from predictable teacher-student interaction. Robin could have reasserted her power and requested that Alexis answer the question more

completely, but instead Robin essentially “handed off” power here by allowing Alexis to move forward with the student-led discussion.

Teacher Navigation Practices

This WOMM discussion offers an opportunity to look closely at the subtle moves that teachers made during student-led talk. As discussed in the literature review, teachers still work to orchestrate learning during student-led talk, but they rely on a very different set of navigational practices than the traditional IRE. Teachers must position themselves as *learners* (rather than evaluators) in reaction to how students are thinking and what students know: “[teachers’] role [is] one of nurturing and maintaining a scholarly quality of interpretive process” (Mayer, 2012 p. 117).

Student Navigation Practice (code)	Frequency
Controlling discourse	37
Asking a question	20
Repetition and Rephrasing: <i>Addressed to group</i>	6
Repetition and Rephrasing: <i>Addressed to individual</i>	4
Incorporating texts into discussion	1
Evaluating and critiquing student ideas	0

See Table 6 above for the frequency of teacher navigation practices. There was a complete absence of teachers “evaluating and critiquing” student responses, which suggests the kind of willingness to suspend judgment that is necessary when listening to students with the intention to understand their ideas rather with the intention to judge and evaluate. Robin’s and Kirk’s main navigational practices during the discussion were to monitor and control student behavior, mostly in the form of protecting the talking space for the selected speaker from interruptions (“controlling discourse”). Notice also that Robin and Kirk did not introduce any new substantive claims or knowledge to the discussion. In the following sections I highlight two different instances when Robin inserted herself into the discussion. Looking closely at these instances offers a picture of the complex orchestration in which teachers engage during student-led discussions in the democratic classroom.

Revoicing Tanner's Divergent Idea

Becca and Myles, both older students, began the discussion by sticking closely to Alexis's proposed topic (i.e., Theme 1: Immigration laws):

[49] Becca [5th grader]: *I don't see why they would want to, um, do it in Indiana cause it sort of, it makes sense in Arizona but in Indiana it doesn't make sense to have that law.*

[50] Tanner [2nd grader, not "officially" called on to speak, interjected in a voice loud enough that only those near him can hear clearly]: *"Yeah, Indiana's a free state."*

[52] Myles [6th grader]: *"Well, kinda like Becca was saying, it doesn't really make sense in Indiana. But, you really see it in Arizona because they're on the border and ... they and in Indiana we are like on the other side of the country from the border."*

Although Myles was sitting close enough to hear Tanner's interjection (turn 52) about Indiana being a "free state," Myles chose to stick with the "official" topic of the discussion, citing geography as the main reason why immigration laws were unnecessary in Indiana compared to a state like Arizona so close to the "border." Tanner's interjection might have been ignored as simply a naïve, misinformed remark; however, in this discussion Tanner's interjection marked a significant ideational turning point. A few turns later, Robin implicitly suggested that she believed this younger student's idea was worth further consideration when she revoiced his interjection:

[58] Robin [teacher]: *What Tanner said was interesting ... I'm wondering what it means to live in a free state?*

In a typical IRE structure Robin might have evaluated Tanner's interjection (or ignored it), and yet here she chose to revoice his idea by "wondering what it means to live in a free state." Revoicing, as described by O'Connor and Michaels (1993), is a sequence in which the student has the ultimate interpretive clout to agree or disagree with the teacher's reformulation. The simple act of revoicing supports discussion as a construction of knowledge by multiple participants rather than positioning the teacher as the source of authoritative knowledge. Within the WOMM discussion, the intent of Robin's revoicing was not an invitation for Tanner to explain or revise his thinking; it was an invitation for the entire class to share ideas related to his interjection. Tanner's and Robin's turns at talk reframed the WOMM conversation: moving it away from a strict focus on immigration laws and inviting a broader exploration of laws and freedom (i.e., Theme 2: Relationship between laws and freedom).

But why Tanner? What was it about his comment that caused Robin to insert herself in the discussions? During my extended time in this classroom, it was clear that Tanner often struggled with sitting and listening for long periods of time. He

was an active student who always needed to be doing multiple things at once; for example, he often drew while Kirk was reading aloud. Waiting for a turn during the WOMM discussion required a great deal of patience for students—it could be 4-5 minutes from the time a student raised his/her hand until he/she shared an idea with the group. For an impulsive student like Tanner, waiting this long from the moment an idea entered his mind until he was able to share it was incredibly difficult (if not impossible). During the first few minutes of the WOMM discussion, Tanner interjected multiple comments after a speaker finished. Robin ignored some of them and also quietly reminded him that “he did not need to comment.” He continued to interject comments, which signaled to Robin that he was interested in being involved in this discussion. Recognizing how difficult it was for Tanner to wait for an official turn, but valuing his interesting comment of “living in a free state,” Robin made the decision to revoice this divergent idea to the group. Based on informal interviews, I can conclude that Robin made the decision to revoice Tanner’s comment for two main reasons: 1) she was hoping to encourage Tanner’s participation in the discussion in a more official capacity (i.e., she wanted him to feel invested in the discussion enough that he’d be willing to raise his hand for a turn); and 2) she wanted to withhold from evaluating Tanner’s comment and relied on other students to question and challenge the assumptions embedded within his remark.

Revoicing Harpo’s Expert Knowledge

Harpo was a well-respected 6th grader who many students identified as “one of the smartest kids in our class.” He knew a great deal about current events and even studied “organically modified organisms” for his final research project of the year. Harpo and I often engaged in political conversations, as he seemed to enjoy interacting with adults more so than other students. I happened to be sitting near Harpo during this WOMM discussion, and the entire time he was whispering short quips and responses to other speakers. Finally, 12 minutes into the discussion, Harpo raised his hand to officially participate in the meeting. In response to two previous students who hypothesized that a world without laws would be “out of control” and filled with “mayhem” and “killing,” Harpo offered the clearest, most nuanced explanation as to why he disagreed with these responses:

[104] Harpo [6th grader]: *“Ok, so the first thing I have to say is totally off topic, but I think it’s really, really, really wrong to say that without laws everything would be chaos and everyone would be killing each other. Because, with tons of people, I mean think even without um laws, there is some human decency in people that would uh make them stand up for other people [voice trails off to almost a whisper]. I don’t know. Like if you go back long enough ago when there were no laws. And then the other thing is for Arizona they want to make sure you’re not an illegal immigrant because they’re having a lot of problems with them taking jobs and everything”*

Harpo’s choice of words not only positioned him as an expert in the way he was able to talk about and justify ideational content, but also in the way he reflected a deep

understanding of the *practice* of discussion itself. His preface, “the first thing I have to say is totally off topic,” acted as a sort of metastatement reflecting his understanding that the discussion had strayed from the original prompt of immigration laws. His response addressed the more recent developing themes as well as Alexis’s initial turns at talk that initiated the discussion. By suggesting that laws aren’t necessary to control citizens’ behaviors, Harpo referenced the heart of a participatory democratic society, which is that citizens must be self-regulating—individualism must be tailored in light of the collective good of the community. He offered an abstract concept (“human decency”) and historical reference (“long enough ago when there were not laws”) as justification for his position; students offering evidence of laws being unnecessary consistently used these same two forms of justification. As soon as Harpo finished, Robin immediately inserted herself into the discussion with a request:

[105] Robin: *Harpo, could you restate what you just said, the last thing?*

[106] Harpo: *And ah, in Arizona, make sure uh they’re not taking over jobs down there I guess. Kind of...*

In his response, Harpo seemed to second-guess himself. In an “observer comment” in my field notes, I wrote that all of sudden he “acted as if he was being forced to talk,” while a few moments earlier he was confident and eager to share. Perhaps sensing this apprehension, Robin used revoicing and finally questioning in multiple attempts to reengage Harpo with the ideas he had just shared:

[108] Robin: *“In Arizona there is an issue with... “*

[109] Harpo [tries to talk over Robin]: *“There with the law...”*

[110] Robin [eye contact with Harpo]: *“immigrants taking jobs.”*

[111] Harpo: *“I guess so.”*

[112] Robin: *“Is that what you’re talking about? Do you think that’s why they’re concerned?”*

[113] Harpo: *“Partially... I don’t know.”*

This sequence pulls apart the subtle differences in the reasons why a teacher may choose to repeat or revoice a student utterance. In turn 108 Robin revoiced what Harpo shared in a louder voice so that other participants could hear his ideas. There was a sense that he had some expert knowledge that Robin felt was important for all students to hear and consider. In turn 112 Robin used revoicing and questioning to encourage Harpo to keep talking and perhaps offer explanatory reasoning. She knew Harpo well enough to know that his knowledge about immigration issues was far more extensive than other students’ in the class; however, Harpo replied with “partially, I don’t know,” which abruptly ended his turn at talk.

Harpo was an extremely shy student, and this seemed to be a case of him misinterpreting Robin’s intention. By questioning and revoicing, Robin was trying to

validate his ideas, but his body language and soft voice indicated that he became increasingly self-conscious, perhaps wondering if he had shared information that wasn't correct. Harpo's vignette reflects the complexities involved in orchestrating student-led talk in democratic classrooms. Robin's decision-making process was incredibly nuanced from moment to moment, and it required far more than simply sitting back and letting students talk.

Conclusion

As the discussion progressed over the final 15 minutes, students worked to construct this relationship between freedom and laws by critiquing one another and the world outside the classroom. The "seminar" nature of the discussion invited students to not only account for their own thinking, but to open up to a world filled with diverse perspectives. The purpose of student-led WOMM discussions was an "enlarged understanding," not a consensus on the final, "official" story (Parker, 2006). While there was no explicit evidence of individual perspectives changing over the course of the discussion, the findings highlight the diversity of ideas that were examined, explored, and constructed as students learned to participate in a community "where they have a stake" (Haynes, 2002, p. 56).

In future work I intend to look more closely at how young children in this multiage classroom get "apprenticed" into ways of participating in the community—especially of interest are the tools of critique and argument. The WOMM discussion focused on in this paper is just one example of how "exploratory talk" offers students a glimpse of knowledge emerging in democratic classrooms through "the restless, impatient continuing, hopeful inquiry [humans] pursue in the world, with the world, and with each other" (Freire, 1997, p. 58).

A Post Script

Vivian, a 6th grade student in the class, composed an eloquent thank you letter that she gave to Robin and Kirk on the last day of school (see Appendix B for a copy of the full letter). In it, Vivian explicitly cited WOMM discussions as one of the things she "loved" most about being a member of this class:

In WOMM we get to discuss and debate issues, both in the classroom and in the outside world. This teaches us how to get along with other people's opinions, and how to look at other sides of a problem – something that can't be taught from a textbook. (V. Johnson, personal communication, June 6, 2011)

When considering the *purpose of school*, this note exemplifies the kind of thinking that I think is at the heart of what it means to democratize classrooms. This excerpt suggests that Vivian recognized that these weekly discussions helped her make sense of the world and life outside of school. By explicitly downplaying the knowledge offered by textbooks, she called into question the dominant interpretations offered through the official school curriculum. She viewed knowledge production as a process of discussion among diverse individuals

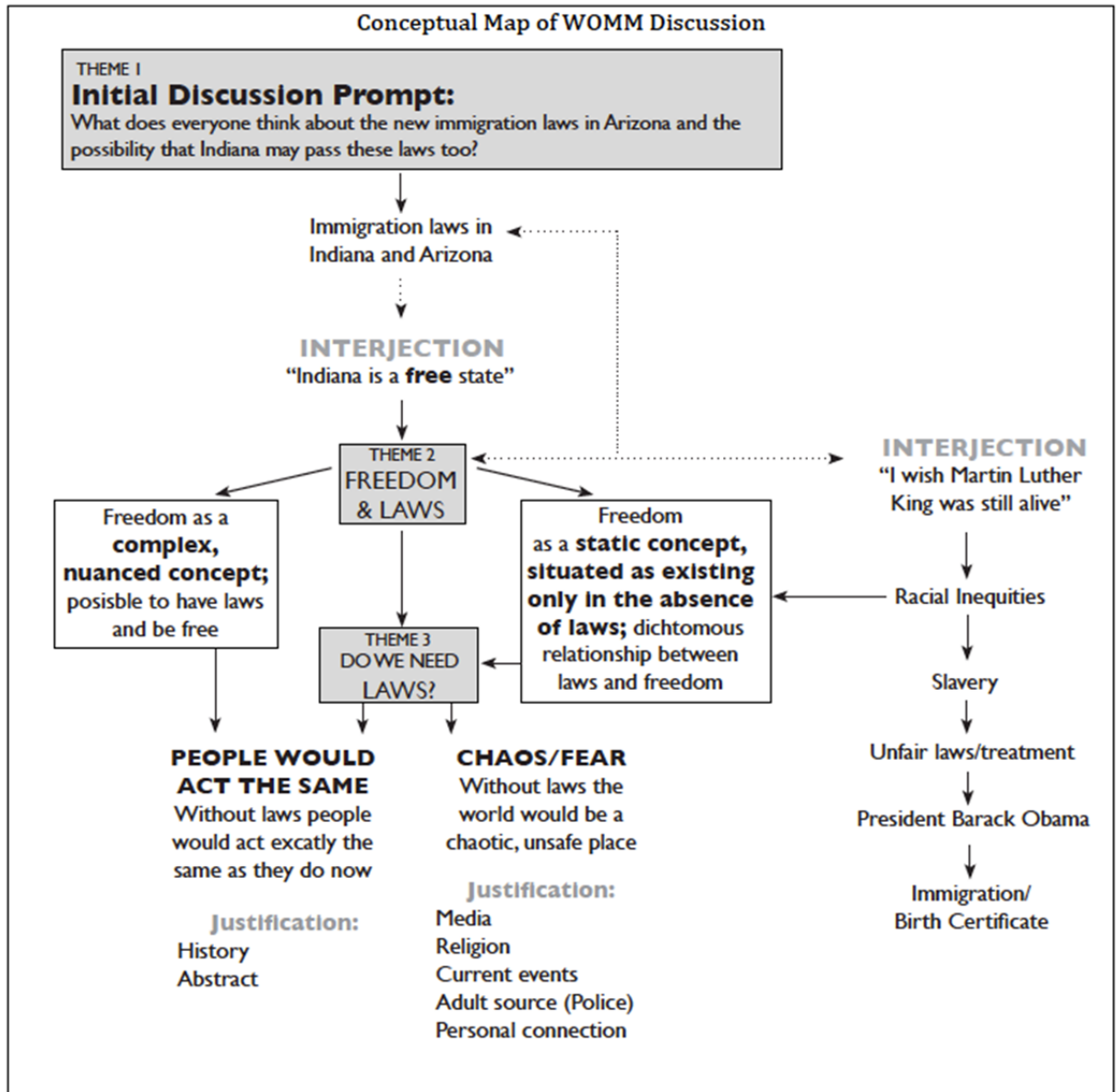
working to understand each other's unique perspectives. As Mayer (2012) suggests, it is through "providing opportunities for all students to make sense of their immediate experience in a culturally literate manner and in relation to broader social realities, [that] teachers help to democratize the world" (p. 38).

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Appendix A Conceptual Map of WOMM Discussion



Appendix B

Thank you letter from 6th Grader to Robin & Kirk

Dear Ms. B and Mr. G,

I've loved being in this class ever since first grade. This class is truly unique. All my friends are really close, and even people I'm not friends with seem like distant cousins.

One thing I love about this class is the freedom. In other classes, they might assign books or writing subjects, but in this class, we get to choose practical everything we do, and I think that that's what makes all of us love reading and writing so much.

I also love your focus on critical thinking. When we all had to decorate our doors with ways to stop bullying, everyone else did pictures of sharks or Cookie Monster or Pac-Man. I'm not saying anything's wrong with that, but our doors were covered in real, well-thought solutions while others just listed things that you shouldn't do.

→ In WOMM, we get to discuss and debate issues, both in the classroom and in the outside world. This teaches how to get along with other people's opinions, and how to look at other sides of a problem something that can't be taught from a textbook.

And this class is so inclusive. I think that having the room 16 kids in our class is good for our class and their class. Outside of school, people with disabilities aren't separate from everyone else, so learning how to interact with the other is good for both of us. It teaches tolerance which also can't be taught with a textbook.

In math, you are so helpful. The sixth graders get to help each other with problems, and even though I know we won't be able to do

that in middle school, we should. School is probably the only place where you can't work together.

I love the way our class is filled with traditions, legacies, and inside jokes, from the Broom Dance, the pencils, the banana split, and pieing (which we know, you're going to do, by the way) to The Penguin.

This letter would not be complete without something on Red vs. Gray. It has taken many forms, but I think (I'm not sure, though) that its roots can be traced back six years to when Toudora and I used to attack Mitch, Ben Kugler and Forrest during recess. This became chasing Benji, Spenc and Simon, which more and more people joined, some on our side and some on theirs. When we caught them, they would get dragged to a small and crowded 'jail'. This became boys vs girls, which had the same rules as Red vs Gray. The problem with this game was that some boys would go on the girls team and vice versa. So we made Red vs Gray. For a while the playground supervisors banned Red vs Gray, and so instead we played Dragons vs Unicorns, which just happened to have the same rules.

Now, Focus Study. You knew I would be getting to that, didn't you? Focus Study is the best. What I love is how open it is. We can study anything, pretty much, from Edgar Allan Poe to Robots to chepacabras. Younger kids can study cats or mice and have 45 slides on a powerpoint, each with a bright background covered in clipart, each with one fact like 'they are cute' and that's perfectly fine. Once they get to sixth grade, they'll have well-researched and well-written presentations. We can all learn from

each other.

That's the very best part about this class; we can all learn from each other, and everyone has something to give. Younger kids and older kids can be friends, and they can teach each other. We are all teachers, learners, and friends.

It's the absolute best place to be, and I wouldn't have it any other way.

Love,



P.S. I'll visit as often as I can!

The World of Penguins: The Role of Peer Culture in Young Children's Interaction in Online Games

Tolga Kargin

Abstract

In this study, to be able to understand the role of the children's interactions with each other and the role of online and offline communities on children's play and digital literacy practices, we examined a group of children's collaborative play within the Club Penguin virtual world while they were engaging in an after-school setting. We had eight participants (one girl and seven boys) between 5-8 years old. During our study, the participants worked independently, but sat side by side in the computer room as they controlled their penguin avatars in the virtual world. To answer the central research questions, we used several kinds of data collection methods. We performed participant observations, took fieldnotes, and videotaped all 6 one-hour-long sessions during our study. Since we focus particularly on the interactions among children and their effects on play and literacy practices, we employed Vygotsky's Zone of Proximal Development (ZPD) concept as our theoretical framework. Also, to be able to analyze the influence of children's online and offline communities on their play and digital literacy practices, we used the second-generation activity theory.

Introduction

According to North Central Regional Educational Laboratory (NCREL), "digital-age literacy" is one of the most relevant twenty-first century skills (Trespacios, Chamberlin, & Gallagher, 2011, p. 49). Twenty-first-century children should be able to organize, understand, analyze, and evaluate information by using digital technology. As Stephens and Ballast (2010) point out, today's children use digital platforms more than any previous generation. They are reading, writing, shopping, communicating, and playing with each other on digital platforms. They are rarely practicing digital literacy in schools, but mostly using them in their homes and in after-school settings.

Today's children are growing up in the digital age, so technology is a significant part of their lives. Prensky (2006) defines twenty-first-century children as "Digital Natives—the new 'native speakers' of the digital language of computers, video games, and the Internet" (p. 28). Our children, live within technology and use technology very frequently in their daily lives. Therefore, their literacy practices are different from those of previous generations. The relationships between peer cultures and the digital literacy practices of adolescents and young adults have been heavily researched (Black & Steinkuehler, 2009). However, far less attention has focused on emergent readers' and writers' digital literacy practices in virtual worlds

such as Club Penguin. The purpose of this study is to examine how young children use play and digital literacy practices in order to be able to participate in their online peer culture, and what the roles are of the online and offline communities to which they belong.

This study is a part of an ongoing project conducted by Karen Wohlwend and her research team. In this part of the project, I gathered data and analyzed it as a co-investigator. In this study, we examined the collaborative play of a group of children within the Club Penguin (Disney)¹ virtual world while they were participating in an after-school program. To be able to understand the role of the children's interactions with each other and the role of online and offline communities on children's play and digital literacy practices, we attempted to answer the following central research questions:

- How do young children interact with each other in after-school settings while playing online games on popular media websites and social networks?
- What is the role of these online and offline settings on children's interactions?

Access to Technology: Experts and Novices

According to the October 2010 report of the United States Census Bureau, 79.2% of 3-17 year old children live in households with Internet access, and 56.2% of this age group have individual access to it at home. Therefore, even though children in this age group live in households with Internet, this does not guarantee their individual access to it. In addition, even though they say they have individual access and use it at home, it is hard to figure out from this report at what level and for what purposes they use it.

According to Warschauer (2008), there is enormous diversity among children in terms of their access to technology. Warschauer analyzes access to technology under four general areas: physical, digital, human, and social resources. Physical resources are the necessary devices (e.g., computers or mobile devices), and the Internet connection. Digital resources refers to content that is available online; even though there is an unlimited information that individuals can reach online, this information is limited to the individuals' culture, and their language ability. Human resources refer to the knowledge and skills required to use computers and the Internet. These skills include both the ability to read and write, and digital literacy. Finally, social resources refer to social relations and the social structure in families and communities. According to Warschauer, "there are many degrees of access to ICT [Information and Communication Technology], depending on a complex combination of physical, digital, human, and social resources available" (p. 144).

¹ Club Penguin (Disney) is a virtual world containing different kinds of online role-playing games and activities where players are represented by penguin avatars.

To be able to answer our central research questions, first we need to identify our participants' degree of access to technology. With respect to Warschauer's definition of access to technology, there was considerable diversity among them. In terms of physical resources, as was noted in our field notes several times, and easily determined from conversations between participants, some of them had been using their own computers and the Internet at home for years, but some others only had access to technology at school and in the after-school setting.

There was a divide among the participants in terms of human resources, too. While some of them are experts on the Club Penguin game or at using computers, others are novices with little (if any) experience. While deciding on their expertise, we controlled for whether the participants had attended previous computer room clubs, or if they have their own Club Penguin accounts. The participants we labeled as novices are the ones who struggle to find letters on the keyboard, or who have a hard time opening a webpage.

In Warschauer's definition, social resources refer to social relations and social structures in families and communities. Since we had a diverse participant group in terms of their races, their social resources were also different from each other. In respect to Warschauer's definition of access to technology, there was diversity among the participants of our study. However, this did not affect our study negatively. Since the participants sat side by side in the computer room and played the same game, they answered other participants' questions and helped and taught each other during the study.

Theoretical Framework

Since we focus particularly on the interactions among children and their effects on play and literacy practices, we decided to use Vygotsky's Zone of Proximal Development (ZPD) concept as our theoretical framework. As broadly explained by Vygotsky (1978), the Zone of Proximal Development "is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). Vygotsky highlights the importance of peer teaching with the idea of the Zone of Proximal Development, which was central to our study.

Current Vygotskian scholars (Goncu and Becker, 1992) believe that in addition to learning from a more knowledgeable peer, the activity itself can create a Zone of Proximal Development for children. For example, when children interact with an online game, their interaction with physical and visual tools creates a zone for children within which they learn how to play the game.

For our second question, to be able to analyze the influence of children's online and offline communities on their play and digital literacy practices, we used second-generation activity theory (Engestrom, 1987). In second-generation activity theory, the importance of interaction among individuals becomes more visible. The division of labor, the rules in the community, and the community itself are the

important components. The roles of the each components of second-generation activity theory are discussed throughout this paper while analyzing our data.

Methods

Setting/Participants

For an after-school setting we chose the Boys and Girls Club,² which serves mostly working- and middle-class families in a small town in the Midwestern US. The Boys' and Girls' Club offers small group clubs organized around children's interests. While some participants play musical instruments, some play in the gym, some read books, and still others do homework. Within the Boys' and Girls' Club, children are divided into three groups: eight and youngers, nine and older, and teens.

We studied the eight and youngers in a computer room club. As an online game for our study, we chose the Club Penguin game designed by Disney, and entitled our club the "Club Penguin Club." We intentionally chose the Club Penguin game, because this game allows players to see each other on screen; the children are able to see each other, chat with each other, and play together in real time. In our project, this feature helped children enrich their interactions in both the online and offline settings.

Club Penguin has basic and deluxe membership options. The basic level is a free membership for everyone who registers and provides an email address. The members can change their avatar's name and color, and can get a basic igloo. The deluxe membership is \$6.99 per month and allows members to buy additional clothes for their avatars, and furniture and artifacts for their igloos. The members who have deluxe membership can also attend the members-only events, go to the secret places, and adopt pets (puffles). These features of deluxe membership offer members a greater amount of social capital (Marsh, 2011).

We had eight participants (one girl and seven boys) between 5-8 years old. During our club activities, the participants worked independently, but sat side by side in the computer room as they controlled their penguin avatars in the virtual world. The club met for one hour once a week for six sessions on Wednesday evenings from 5:00 p.m. until 6:00 p.m. Leaving or staying in the room was totally up to the participants. We did not ask them to stay in the room if they wanted to leave. Sometimes, they were simply bored and left the room, sometimes our club time overlapped with other activities and they chose to attend the other activity, and sometimes their parents came earlier and picked them up to go to home. During the six sessions, we observed whichever participants we had in the computer room: sometimes it was all eight of them, and sometimes it was only a few of them.

Data Collection

This research study uses ethnographic methods (Ericson, 1990) to examine children's online and offline interactions within the Club Penguin virtual world

² Boys and Girls Clubs are after-school settings where young people go to learn, do homework, develop social skills, express themselves creatively, and participate in sports.

while they play in the Boys' and Girls' Club computer room. To answer the central research questions, several kinds of data collection methods were used. We performed participant observations (Ericson, 1990), took field notes, and videotaped all six sessions during our study.

Field Notes and Observation

During the initial visit, the computer room rules and the names and assigned penguin accounts of each participant were recorded. During the initial and subsequent visits, I recorded the participants' seating plans (see Appendix 1) and their participation schedule. I also recorded the interaction of the participants, who were sitting on the computers in front of the cameras. I watched their play, asked them questions while they were playing, and recorded their answers.

Videotaping

During club activities, we provided the participants with precreated penguin accounts but also allowed them to use their own account if they wanted to. We chose two computers, which are located side by side, and videotaped just those two computers with the help of three cameras. In each session, the participants sat on these two computers on a first-come-first-serve basis, and we set three cameras (left-middle-right) to capture the interaction between the participants more clearly. The left and right cameras captured the screens of the players. The middle camera had a wider angle and captured both of the screens and the physical interaction between players. While analyzing our video records, we synchronized those three cameras. This helped us to hear players' conversations better. The left and right cameras helped us to see the online interaction between the penguin avatars, and the middle camera helped us to analyze the physical interaction between the players.

Findings

The participants we observed in the Boys' and Girls' Club had different cultural backgrounds; they came from different families and each of them had their own social history. They were using computers and online video games at different levels, according to their expertise. Some of the children were familiar with the Boys' and Girls' Club atmosphere and were proficient at the online games, and some were novices and needed their more knowledgeable peers to help them learn the rules of both the Boys' and Girls' Club computer room and the online game. The interaction between the expert and novice children in this study reminded us of Vygotsky's (1978) Zone of Proximal Development (ZPD), because students were teaching and learning from one another constantly.

In our study, our novice club members had the opportunity to work with proficient club members. Expert and novice members were engaged in the Club Penguin game and learning from each other. An early instance comes from my field notes from the very first day of our study. We had written the user name and password of the penguin accounts on sticky notes and attached them to computers

on the very first day of our study, but didn't explain to the club members how to log into the game. Jack, our novice player, tried several times to log into the game on his own, but he couldn't. Karl, a proficient player sitting at the next computer, explained to Jack where he needed to type the user name and password. Since Jack did not understand what Karl said, Karl grabbed Jack's keyboard and showed him how to log in. After a while, Jack's computer froze, and he had to log into the game again. Karl took Jack's keyboard and typed the user name and the password, but he could not log in because he had made a spelling error. Jack figured out what was wrong and corrected the mistake, and logged into the game on his own.

According to Vygotsky (1978), the things children do today with the help of more knowledgeable others within the Zone of Proximal Development will be the things they do on their own tomorrow. At the beginning, Jack was unable to log into the game; he tried several times, but failed. After his proficient partner Karl demonstrated to him how to log in, Jack learned how to do it. When he needed to log into the game, he could do it on his own. This example clearly demonstrates Vygotsky's concept of the Zone of Proximal Development, but when we look at our overall data, we have very limited proficient-novice interaction as in this example. So proficient-to-novice peer teaching appears to be an exception in our study.

However, while Chaiklin (2003) criticizes the common conception of the Zone of Proximal Development, he mentions that we should not focus on particular tasks to analyze it, because it is not necessarily a single task. Instead, we should analyze the role of the Zone of Proximal Development in terms of the child's general development. When we compare the video records of the first week and the final week, it is clear that our members had learned how to play the game, how to earn more coins, how to become friends with other penguins, and how to send messages to each other. For example Jack, our novice player who struggled to log into the game in the first week, earned hundreds of coins from several games, earned a yellow belt from DoJo fights, made seventeen penguin friends, learned how to send a message and how to read incoming messages, and became a proficient player by the end of the last session. According to Chaiklin's assertion, children's interaction within the game helped them to develop themselves within their Zone of Proximal Development.

To more clearly explain the role of the Zone of Proximal Development in this learning process, we can also focus on how Vygotsky's (1978) notion of mediated action explains it. Vygotsky's original version of a culturally mediated act includes the stimulus (S)-Response (R) connection (p. 40). However, the reformulated version of the model from the first generation of activity theory is the triad of Subject, Object, and Mediating Artifact (Engestrom, 2001, p. 134). As shown in Figure 1, the subjects in our example are the Club Penguin Club participants who are playing the game and having fun. The mediating artifacts are the computer, the Club Penguin virtual world, and their play partners. Our participants (Subjects) are interacting with these mediating artifacts to play the game and have fun. The object in our study is playing the Club Penguin game and having fun. As an outcome, the

participants learned how to play the game, and gained experience with several digital literacy practices.

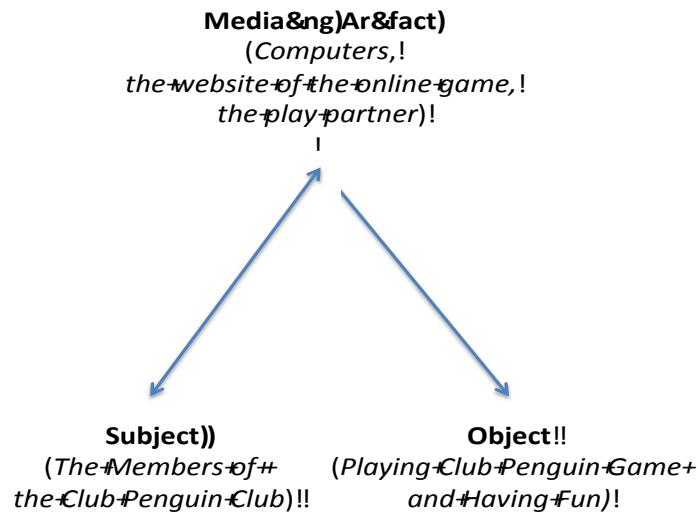


Figure 1. First-Generation of Activity Theory Triad

As cited by Matusov and Hayes (2000), Goncu and Becker (1992) correctly highlight that “not only a more capable partner in a joint activity but also the activity itself can produce a Zone of Proximal Development for a child” (p. 200). In our study, there was a dyadic interaction between the members and the mediating artifacts: our participants were using these mediating artifacts (see Figure 1) to be able to play the game, and their trials and their play partners’ demonstrations helped them reshape their ideas about playing the game. This activity system created a Zone of Proximal Development for the participants. The outcome was that they learned how to play the game and experienced the digital literacy practices within the Zone of Proximal Development created by the activity.

To be able to examine the participants’ digital literacy practices and their interaction in online and offline settings, we selected a five-minute video clip from our video records. In choosing this video clip, we followed three steps. First, we coded the transcripts of our video records according to the location and the game our participants played. We selected the ones in which both partners play the same game in the same location. Then we looked for the ones that have peer mediation. The ones with powerful interactions between the partners were selected. Finally among those videos we chose the one with novice-to-novice interaction.

In this video clip, our participants, Katherine and Chris, were sending friend requests to other penguins in order to increase their friend number, sending messages to other penguins, and playing games in the same virtual place, called Mine. Even though the Club Penguin offers ways to make meaning through penguin actions and accessories, and has been designed with much less print compared to

other virtual worlds (Marsh, 2010; Grimes, 2010), we realized that even in this short time period, the participants engaged in several digital literacy practices (Table 1). From our analysis, we came up with a list of digital literacy practices. They were reading silently, reading orally to share their ideas with their partner, and reading aloud to themselves. They were sending prewritten messages to other penguins and rereading their own writings (Picture 1). Also, while playing, they were acting physically: they were using the arrow buttons and space button, and clicking and hovering with the mouse.

Literacy Practices: Reading, Selecting Prewritten Messages, Technology/Gaming		Frequency *		
		Katherine	Chris	
Observed Gaze and Verbal Language	Searching	38	24	
	Reading Silently	17	9	
	Partner Reading	4	3	
	Reading Aloud to Self	4	0	
	Retelling	2	1	
	Rereading Own Writing	1	0	
	Selecting / Confirming	13	16	
	Talking	3	0	
Observed Physical Action	Mouse-handling	Clicking	12	9
		Hovering	22	8
	Keyboarding	Space Bar	1	2
		Numeric Pad / Arrow Keys	1	51

Figure 1. Digital Literacy Practices

Searching: 1 click that opens a pop-up or drop-down menu.

Reading Silently: Looking at a written word/phrase for a couple of seconds.

Partner Reading: Reading orally to share ideas.

Reading aloud to self: Inner speech

Retelling: Retelling the word he/she already read.

Rereading own writing: Retelling the word he/she has written/chosen.

Selecting/Confirming: Clicking on the secondary confirmation buttons (i.e., after sending a friend request, answering the following question: "Would you like to add ... to your friends? Yes/No")

Talking: Sending messages to and getting messages from the other penguins.

Clicking: Clicking on the onscreen buttons to open options.

Hovering: Hovering on the buttons to see drop-down menus.

Space Bar: Pressing the space bar.

Numeric pad (Arrow keys): Using arrow keys to move avatars in different games.

* Frequency gives the number of the particular actions/activities done by Katherine and Chris in the five-minute long video.

Table 1. Digital Literacy Practices



Picture 1. Messaging

Rowell and Burke (2009) indicate that children's digital literacy practices with images and animations are quite different from their literacy practices with print materials. Children's interaction with mediating artifacts helps them in the meaning-making process. As children play in virtual worlds, they experience different mediated actions, such as clicking a mouse and using arrow keys on a keyboard in our case. Our participants' digital literacy practices involve physical actions with those objects (e.g., moving a computer mouse and pressing keys on a keyboard), which mediated (Vygotsky, 1978; Wertsch, 1991) the activities in the Club Penguin virtual world (e.g., adding friends, chatting, scanning a map to find a location).

When we analyzed the video records, we realized that sometimes the participants were leading and following each other and simply copying the things their partner did while they were collecting coins in the Puffle Lunch game, recording their own music in Dj3K, and fighting with other penguins in Dojo. They were watching their partner's game, learning the tricks of the game, and using those

tricks in a different way in their own games. At first glance, it looks like simple copying. However, as first explained by Vygotsky (1987) and then highlighted by Chaiklin (2003), children can only imitate things that lie within their own Zone of Proximal Development. Children’s interaction with this online virtual world and with their partners creates a Zone of Proximal Development for them, and they are able to copy the things that lie within this zone.

In order to answer our second central research question, “What is the role of the online and offline settings in children’s interaction?”, we decided to use the second-generation activity theory. In our study, children were playing the Club Penguin game in the computer room of the Boys’ and Girls’ Club in a small town in the Midwestern United States. There were eight members playing the same game at the same time in this computer room, and other players around the world were connected to the game online. The club participants shared the online and the offline space with other players, and there was interaction among the players in both the online and the offline settings. These conditions interface well with the second generation of activity theory (Engestrom, 1987). In the second generation of activity theory, Leont’ev highlighted the importance of the interaction between individuals in the activity (Cole & Engestrom, 1993, p. 7). According to Leont’ev, division of labor, community, and the rules are the additional important components of the activity theory (Figure 2).

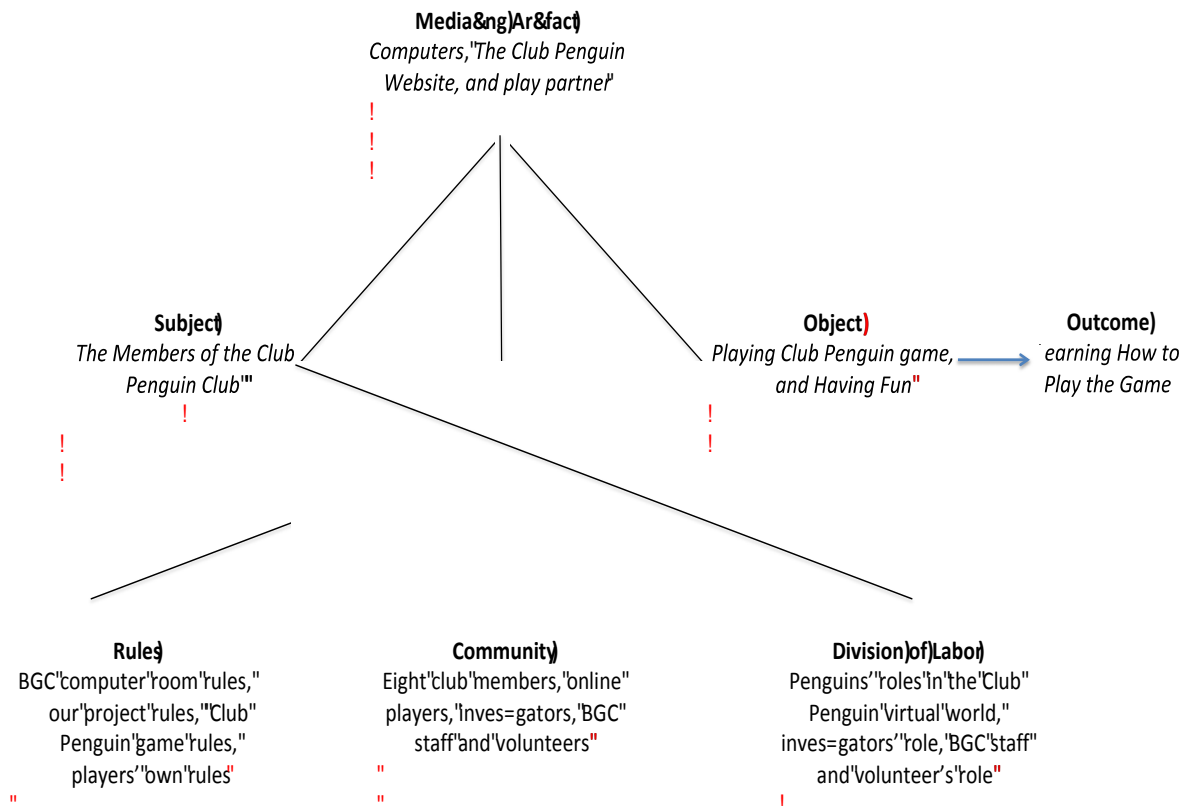


Figure 2. Second-Generation Activity Theory Triangle

In our study, the club members had to consider the Boys' and Girls' Club computer room rules, our project rules, and the Club Penguin game rules when playing the game. In addition, the participants created additional game rules to be able to coordinate their play. These rules shaped the actions of the club members during the project. Their learning was also affected by the community in which they were situated. Additionally, the online community where they played together and the other club participants' contributions also affected the club participants' learning and play. The club participants were aware of the division of labor in the online and offline communities in which they were situated.

For our club participants, the aim of this activity was playing the Club Penguin game and having a good time while playing with each other. The game rules and the Boys' and Girls' Club computer room rules were effective components of this activity. For instance, to be able to see each other, the pairs had to log onto the same servers. Otherwise, even if they go to the same location and play the same game within the Club Penguin website, they are unable to see each other; they can only see the penguins who are in the same servers as them. This rule of the game limited the interactions between the pairs. Since the server that their partner had logged onto was full, some players could not log onto the same server as their partner. Thus, they could not see each other on screens, and could not play together. Play then became an individual activity, and the club participants' interaction and learning were negatively affected by this game rule.

Some of the Boys' and Girls' Club computer room rules also affected our club participants' play and digital literacy practices negatively. The Boy's and Girls' Club members are not allowed to chat with online players in any way. This rule limited our club participants' online interactions. Also, the Boys' and Girls Club members are not allowed to turn up the volume of the computers. Thus, our Club Penguin Club members could not play some of the games they wanted to, and this also negatively affected their interactions.

Community was the other important component of this activity. The club participants were interacting in both online and offline communities. They were in a computer room, and the other club members in the computer room affected their interaction. They were able to see where other club members went, what they did, and how they did. Then, the club members decided what to do in their own games. For example, after Chris heard other club members' voices from the back computers saying, "I am in the Pizza Place, I am in the Pizza Place," he turned back and told them, "Hey, I am going in the Pizza Place, too." The members in the computer room navigated each other to different locations in the game, and this increased their interaction within the online environment.

The other online participants who joined from all over the world were the second part of the community. The club participants were adding "foreign" penguins as friends. To be able to add fancy penguins as friends, our club participants would go to several locations and try to interact with different penguins. This also enriched their interaction, their digital literacy practices, and their learning.

The club members were also aware of the division of labor in this activity system. They knew that they should play their game without bothering anyone else in the computer room; the computer room staff is responsible for everything in the room, so everyone should listen to the computer room staff; and the investigators are responsible for setting up the equipment and any questions related to the Club Penguin game. So, to be able to play the game, which is their purpose, they considered the division of labor; they asked general questions of the computer staff, they tried to not bother anyone else in the club, and they requested help from me for any issues they encountered in the game.

In sum, the club members have learned not only from the partners at whose side they were seated, but also from the online participants and other club members in the computer room. The game rules, the community rules, the division of labor, and the community itself were all effective components of this activity.

Conclusion

In this study, we analyzed our data using the lens of Vygotsky and activity theory. We realized that the club participants' aim was playing the game and having fun; they were not necessarily playing to learn something or practice digital literacy. However, while playing the game and having fun they learned how to play the game and experienced digital literacy practices. Besides interacting with more knowledgeable peers, their interaction with the Club Penguin virtual world created a Zone of Proximal Development for them, and they learned within this zone. Even the actions they simply copy from other participants fall within their Zone of Proximal Development, because children can only imitate things that lie within their zone. In this activity, in addition to the Club Penguin Virtual World and the play partners, the online and offline communities in which they are situated, the division of labor within these communities, and the rules of these communities have important roles.

It was clear that the participants had different backgrounds in terms of their access to technology. Some of the participants were novices and not familiar with the game, others were experts and had a rich knowledge of the game. We wonder if we divided them into two groups, novices and experts, and paired them as novice-to-novice, expert-to-expert, and novice-to-expert, if there would be any changes in their interactions, learning, and digital literacy practices. This question can be examined in a follow-up study.

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Distinguishing Features of Funds of Knowledge, Curriculum of Lives, Habitus, and Discourses

Mary Rice

Abstract

This paper explores the affordances and limitations of several popular conceptual frameworks often used in qualitative literacy research, especially that where narratives are used as data. These frameworks are Funds of Knowledge, Curriculum of Lives, Habitus, and Discourses. The author draws on the narratology of Bal to open space for comparing these frameworks, and through a sample analysis of one narrative, exposes underlying assumptions the frameworks reveal about relationships in research, literacy, and narrative analysis.

Introduction

Distinguishing Features of Funds of Knowledge, Curriculum of Lives, *Habitus*, and Discourses

I just wish you all could understand how many shots I took to make what came out to be like a 10-minute film. And it wasn't that they were not good shots, some of them were, but they just did not tell the story the way I wanted to tell it. (Alan, reconstructed field note, 2008)

This field text comes from a presentation made by Alan, a then-15-year-old boy whose literate identity I was inquiring into (Rice, 2011a). The film he made for his class was based on a folktale in a picture book that I had given Alan to read the year before. He loved the book and decided to marshal his resources—including the neighborhood children, his family, and other members of his class—to produce a cinematic version of the picture book. While I was analyzing this text, I struggled to decide which methodological lens to apply to this text and to my study on a larger scale. Like Alan, I believed that I had many good “shots” of narrative data from which I could choose to try to tell the story of Alan's literacy. However, I also wanted to attend to telling the story in a way that honored the boys and their families and would render Alan's story optimally powerful. When I realized this goal, it became necessary to carefully examine several analytical lenses through which the shots of Alan's literacy might be viewed before coming to a decision.

As a qualitative researcher, one of my major academic curiosities lies in classrooms—complete with educators and children, and parents, and others—as living ecologies. With such an interest, I was drawn to multiple tools from multiple programs of research for describing ways of knowing, living, and interacting on and

between home, school, and community landscapes. The tools¹ that were often cited in the work that I was reading were *Funds of Knowledge* (Moll, Amanti, Neff, & Gonzalez, 2001), *Curriculum of Lives* (Clandinin et al., 2006), *Habitus* (Bourdieu & Johnson, 1993) and the capital that accompanies it (Bourdieu, 1986), and *Discourses* (Gee, 2007). As I moved forward in my scholarly work, I became interested in distinguishing between these four conceptualizations. I desired to understand more fully the work of others, to avoid confounding these tools in my own work, and as I mentioned earlier, so that the stories I used as research texts would garner narrative resonance (Conle, 2010), or some optimal degree of fidelity. In other words, I wanted to trust the work of others and give my own commensurate confidence.

Setting the Purpose for this Paper

The purpose of this paper is to demonstrate the methods I used to consider not only the differences in these various approaches, but also to understand the ways in which they overlap. In addition to the tools that I considered for analyzing Alan's narrative of his literacy, I found it helpful to use one additional lens to make visible the limitations and affordances of the tools. The lens that assisted me in this analysis is based on the work of Bal (2009), who proposed stories that represent the perspectives of narrators, characters, and actors.

In Bal's (2009) work, a narrator is connected to a *focalizer*, or element, which has a point-of-view. The narrator determines who or what the focalizer will be. Although there are some conceptions of grammar that allow for first-person, second-person, and third-person narrators, for Bal, there is only first person. The narrator need not be directly in the narrative. But even a sentence where the pronouns *he* and *she* are used comes from a first-person narrator telling the story through a linguistic *narrative agent*. A narrative agent is some type of text. A character is always directly in the narrative. In fact, the characters are the specific anthropomorphic figures that the narrator tells about. An actor, in contrast to a character's specificity, is general. Actors either cause or undergo events. An event, according to Bal, is a transition from one state, frame, or way of being to another. In a narrative, the character, narrator, and actor can all be the same figure. They can also all be different figures.

In using a storied approach to interpret and discuss these four lenses, I am able to take into account the shifting nature of participants in research whose knowledge and experiences are captured using these tools. I am also able to put together a research story of the interactions between these tools and the data, which is often qualitative or storied in form, particularly in the work that I do as an academic. This paper is neither an attempt to malign nor to exalt any of these conceptual tools. Rather, it is a rationalization for how I came to understand the

¹ These tools are also referred to as *conceptual tools*, *conceptual frames*, *conceptual lenses*, or simply *tools*, *frames* or *lenses* in various studies and handbooks. I have also seen them referred to as *programs of research*, *approaches*, *orientations*, *concepts*, *perspectives*, and even *notions*. I mostly use the terms *frame* and *tool* with or without the word *conceptual* throughout the paper.

nuances of them in my own work, which mainly engages with narrative forms of data.

The following is an explanation of the conceptual tools that are the focus of this article. The researcher(s) or theorist(s) who initially conceptualized each one, as well as the methodologies with which the programs of research are associated, will identify each tool.

Funds of Knowledge (FoK)

The Funds of Knowledge program of research grew out of the work of Moll, Amanti, Neff, and Gonzalez (2001). These researchers developed this conceptual tool not only as a way to organize findings, but also as a method for obtaining them. FoK research was developed specifically for the field of education, with particular attention to teacher preparation and teacher development, although the concepts may transfer to other professions where working with families is essential. In FoK research, teachers form curriculum inquiry groups and schedule visits to families in the communities where they teach. The families are visited and teachers take ethnographies of the households that include inquiries into family work history, recreational interests and other types of knowledge necessary for family survival, especially economic survival, in the community. The aspects of culture that were uncovered, which may prove valuable to understanding how the visited students might make more efficient use of curricular concepts as a result of probing these topics, are referred to as FoK. The teachers return from their series of ethnographically motivated home visits to meet together to plan curricula based on the FoK they identify. In a strict FoK study, the curriculum developed using a FoK approach is then enacted in the classrooms of the teachers who made the visits and designed the instruction. In a variation of FoK studies, teacher candidates conduct the ethnographic interviews to learn more about diverse families, and then they design curriculum for a class that is not their own. In one FoK study, a teacher realized that her students' lives were all connected to the mining industry, and so she built a curriculum around mining to teach the other subject areas in her class. In another study, a teacher used understandings from mothers who sew to teach mathematic concepts (Moll, et. al, 2001).

Curriculum of Lives (CoL)

The Curriculum of Lives conceptual frame (Clandinin, Huber, Huber, Murphy, Murray-Orr, Pearce & Steeves, 2006) has several historical roots. Not all of these are directly related to educational research, but for the purpose of this paper, I will discuss those that are relevant to the development of CoL as a tool for looking into classrooms. Clandinin and Connelly (1992) suggested that teachers' and students' lives together in schools merge to form curriculum. These researchers developed that notion from Dewey's (1938) argument that situations and experiences contribute, or ought to contribute, to an overall education. Complementing Dewey's work, Schwab (1970) described actions in the classroom as being built around what he called curricular commonplaces. These commonplaces are teacher, learner,

subject matter, and milieu. These four entities merge around an activity, the result of which is a curriculum of lives where storied lives are composed, recomposed, shaped, and shifted across the elements of place, time, inward and outward, and social, which form the three-dimensional narrative space (Clandinin & Connelly, 2000).

As teachers and students in a community live in school and live out stories about them, their lives, and the subject matter they are studying, curriculum is made, and so are lives. This frame assumes that teachers are not the only curriculum makers in a classroom. Indeed, both children (Clandinin et al., 2006) and parents are active and direct makers of curriculum both formally and explicitly, and informally and implicitly. Huber, Murphy, and Clandinin (2011) looked at Ji-Sook's familial curriculum where she could not have a birthday party unless she achieved at a certain level in school. It is rare for teachers to be aware of such curricula, yet this curriculum causes both healthy and unhealthy tension for children as they travel between their worlds of home and school (Lugones, 1987).

Habitus and Concomitant Capital

Social classes form *habitus*, which are ways of being, which they reproduce to varying degrees of consciousness in order to assert social prominence (Bourdieu & Johnson, 1993). This frame does not have its origins in the field of education specifically, but rather in general sociology. Beginning in childhood, young people are apprenticed into the *habitus* of their respective class. The focus on resources is purely economic, but encapsulates cultural ones as well. Bourdieu (1986) called the resources that grow out of and alongside habitus forms of capital. He defines capital as "assets that are available for use in the production of further assets" (p. 241).

Bourdieu identifies three forms of capital: economic capital, or that which directly converts to money; social capital, a network of relationships with other people that can potentially be mobilized for social advancement; and cultural capital, or forms of knowledge that will give an individual higher status in society. Cultural capital, according to Bourdieu (1986) subdivides into three types. The first type is embodied capital, which is the inherited, automatic, or nonconscious (Stern, 2004) knowledge that a person has to meet their needs. This type of capital becomes part of a person's character and way of thinking. The second type is objectified cultural capital. People with objectified cultural capital own things that other people recognize as being valuable. The final type is institutionalized cultural capital, such as academic credentials or qualifications.

The differences between cultural capital and social capital are subtle. Kang and Glassman (2010) propose that cultural capital is moral thought, or knowing the moral rules of a social situation, and social capital is moral action that garners trust in the community. This paradigm for connecting thought and action is helpful for determining the difference between cultural and social capital, especially when one exists without the other or when there is an obvious difference in quality or quantity between the two in a given situation.

In places like school, children could have their habitus, and the capital that comes with it, validated, which positions them to display and produce further capital. However, it is also possible that the habitus children possess is not the kind that produces socially sanctioned capital. When students display aspects of a nondominant habitus, they are at risk of being subjected to *symbolic violence* (Bourdieu, 1987). In this scenario, ways of being that are not seen as prestigious are rejected, often implicitly but sometimes explicitly as well. The potential capital from the rejected habitus eventually ceases to exist, since it cannot be used to produce further assets. Hamston and Love (2005) conducted a study on the cultural practices of boys who claimed to like reading but were resistant to school reading tasks. This study articulated the boys' interpreted rejection of the middle class *habitus* embodied in school reading practices.

Discourse

The conceptualization of Discourse grew out of understandings about habitus and capital. James Gee, a philosopher and linguist who eventually turned his interests toward education, is renowned for exploring this concept. According to Gee (2007), part of belonging to a larger community of Discourse is participating in the literacies that form the habitus (Bourdieu & Johnson, 1993) of that group. He distinguished Discourse with an upper-case *D* from discourse in lower case. With a small *d*, discourse refers to the metaconversation occurring among speakers. Discourse, on the other hand, is about the ability to leverage the cultural capital that emerged from habitus through literacy processes, to sound like a full-fledged member of a particular community. Humans, Gee notes, often belong to multiple Discourses. He even proposed Discourse as a lens through which identity-making processes can be analyzed in research (Gee, 2001). Finders's (1997) study focusing on the hidden literacies of adolescents girls also represented a Discourses approach, since she wanted to document which literacies the girls used might transfer into situations outside their friendship groups.

Comparing the Tools Using Teacher Positioning Differences

This discussion will now turn back briefly to young Alan and the story fragment that appeared at the beginning of this paper. Since I was Alan's teacher in addition to being a researcher, I was interested in how I was positioned as researcher and teacher using each of these tools. I was also struck, as I read about these tools, by how the differences in teacher positioning offered some of the first insights I gained into clarifying what distinguishes the lenses from each other. As I considered these various positions, I was able to uncover some critical differences between the tools that led to further disentanglement using Bal's (2009) work. The purpose of this section is to use the simpler explanation of teacher positioning differences to compare the profiled theoretical lenses before moving into a further, more complicated explanation of differences by identifying narrator, character, and actor. Understanding the differences in teacher positioning may also assist researchers in deciding which lens to employ in a particular study with a particular research question or resulting from particular patterns in collected data.

FoK requires that the person(s) involved in uncovering positions have practice or the strong potential for practice. Therefore, a FoK approach positions the teacher powerfully. The primary purpose is not to produce a research article, although researchers do write about this work. In the purest form of FoK, teachers go into the homes of children they teach. They have to look more broadly at the experiences in the home so that they can produce usable knowledge for their current context. The FoK methodology was developed to help teachers use children's and families' existing knowledge to bridge to new knowledge and skills, thus meeting the goals of the school by supporting the children in learning. The teacher makes all of the decisions about which cultural knowledge collected during the home visits to take up as curriculum.

In contrast to FoK, much of the CoL may be barely visible in the school classroom. In CoL, the frame is the home. Everything in school is contextualized to meet the goals of the home. Some recent work in CoL (e.g., Huber, Murphy & Clandinin, 2011) also builds on the notion that children are world travelers between curricula of home and curricula of school (Lugones, 1987). Those who conduct this work are most interested in the tensions that arise for the children who are doing the traveling and the parents who are trying to understand the curriculum of school, rather than how the teachers who are working with the children make sense of those travels.

Unlike FoK and CoL, habitus was not intended as a practical argument. In a practical argument, action is always the end (Kirsznner & Mandell, 2010). When Bourdieu discussed habitus, he was merely offering a way to describe the ways in which people developed intangible aspects of culture that could also be used as means of exchange. Uncovering habitus requires the narrator of the findings in a research project to examine the ways in which people use capital across a broader range of social groups. A teacher using a lens of habitus is an arbiter of habitus, and the students are vulnerable to acceptance of that habitus or rejection by the school culture, often represented by the teacher. Although eliminating the presence of any dominant habitus seems impractical, Delpit (1988) recommended that teachers embrace the cultural capital they have in recognizing and structuring habitus so that they can make sure they explain the rules of the dominant habitus and reduce the symbolic violence about which Bourdieu (1987) warned. In a habitus stance, a teacher is the holder of cultural capital that is either used to develop social capital, or trust with the students, or plays out in the landscape of school as symbolic violence.

Since the notion of Discourses (Gee, 2007) is highly related to the notion of habitus, these ideas share the potential for moving across a range of social groups. As a result, the classroom is automatically diminished. Indeed, the classroom is often referred to as a *Secondary Discourse*. Studies that focus on Discourse as an interpretation lens often conclude that the classroom is the environment that must be altered accommodate the *Primary Discourses* and thus, the assumption is that teachers must change their practices. Since research that employs the lens of Discourses assumes that teachers are disconnected from the primary discourses of

their students, they are positioned weakly and even negatively if they are too disconnected from their school site and their students. In an example of how teachers could or should take up Discourses, Gee (2007) has focused on how the Discourse of video games deserves more space in classroom learning. Studies based on this aspect of Gee's work focus on how teachers make space for this Discourse.

Interpreting Alan's Story

This section turns once again to Alan's story that began this article. The interpretive accounts of his story will be filtered through the lenses of each of the tools that have been profiled in this article (FoK, CoL, Habitus, Discourses) using character, actor, and narrator as the apparatus for organizing the interpretation in each of the frames. For reading convenience, Alan's story is reinserted in the text.

I just wish you all could understand how many shots I took to make what came out to be like a 10-minute film. And it wasn't that they were not good shots, some of them were, but they just did not tell the story the way I wanted to tell it. (Alan, reconstructed field note, 2008)

FoK

In a FoK approach, families and communities take on roles as characters in the narratives that emerge. They can also be the actors, but a teacher in an ethnographic stance narrates the findings. When the teacher makes home visits, comes to new understandings, or begins to build curriculum, this constitutes an event that the teacher experiences. In Alan's story, as an ethnographer looking at how Alan's story reveals the ways in which his family manages its economic resources, I would look to see if his parents were also involved in film. As it turns out, his father has done extensive filming as part of his employment. Part of my FoK approach then might involve inviting Alan's father to help my classes make films. As an ethnographer, I would also be concerned about whether filming was a practice undertaken by others in Alan's class and neighborhood. If it were, then it would garner even more attention, and other families who also filmed might be sought out and visited.

As I made my move from ethnographer to teacher, I would look at the story for ways that the FoK of filming might help Alan make sense of various subject areas. I could interview his father further to uncover the ways that he uses various skills in order to produce visual text. I would consider which of these skills might help me construct curriculum in order to teach my subject matter. How could film production reveal understandings about math, science, history, and literature? Alan was explicit about the fact that he carefully selected shots to incorporate into a final project. This understanding might yield critical insights for talking about how to engage in process writing in school. It also might help me, as his teacher, to design contextualized ways to open conversations about the representation and misrepresentation of groups historically in a text by suggesting that other people with various interests had also been selective about what they chose to include in official instructional materials like textbooks.

CoL

In a shift from the FoK approach, when researchers are using a CoL, families and children also share the dual roles of characters and actors in stories. However, researchers who engage in CoL make strategic, deliberate attempts to represent the research in ways to help them argue that the children are the narrators of the stories. The researcher as narrator may make appearances as a character or actor of secondary importance.

When a CoL interpretation is applied to Alan's story, the focus shifts from Alan's father and ethnographic understandings of how subject matter knowledge is used outside of school, to the tensions Alan may be experiencing. These tensions may emerge because Alan wanted to do a film project, which is possible and even easy to do on his home landscape, but difficult to achieve as he travels from the world of home to the world of school. When researchers engage with Alan's story using CoL, they might wonder about how this experience served as emblematic narrative for other aspects of his literacy or participation in school. Besides a metaphor of world traveling, they might look at the fact that Alan needed almost a full year to do this particular project and wonder if this might cause tension in a school environment where impulsiveness is rewarded over reflectivity.

Any text that might be constructed would be negotiated with Alan in a setting where he would have the opportunity to talk about the experience of conducting his film project and selecting shots that would allow him to honor his home landscape and bring him success on the school one. The ethical relationship between Alan as a student and me as a teacher who now can assert insight about Alan's need to work thoughtfully for an extended period of time might also be discussed. Thus, a CoL approach not only implies the identification of tensions; the health of those tensions is also an object of study. Like FoK, a CoL approach involves the home and the school, but the object is not to bring those two worlds together, but rather to watch and marvel at their interaction.

Habitus

A habitus frame would be interested in narrating the findings from Alan's story in such a way as to raise issues about how the practice of filming operates as cultural capital, where Alan is recognized as important for having access to the skills and equipment necessary to film. The fact that he was able to use these skills and other aspects of his cultural capital to enlist others in helping him make the film demonstrates that he can leverage the trust that is social capital. His desire to pick just the right shots also demonstrates a social astuteness where he realizes that certain configurations of shots will make his product look more legitimate, earning him the trust of his neighbors.

In a habitus frame, it would also be worth noting that Alan lives in an organized neighborhood where the individual families are sufficiently familiar with each other to trust Alan in assisting him in his project. Putnam (2001) would stretch the idea of capital slightly further by suggesting that Alan and/or his family have generalized reciprocity with those who live near them. One might even speculate

that Alan's parents have particular roles which make their family visible and from which Alan benefits. Thus, Alan and his family become bearers of the habitus of their community or unwitting accomplices in symbolic violence (Bourdieu, 1987) if Alan's films are valued over other children's ways of constructing, sharing, and presenting knowledge to groups.

In the end, the questions of habitus center on questions of value that lend themselves to explanation or critique. In a FoK approach, value is also considered, but leveraging the cultural capital in the classroom is the goal. The CoL approach also cares about tension, but the focus is on the tension of the child as he negotiates a curriculum at home and at school, instead of tension between groups of haves and have-nots.

Discourses

In the Discourses frame, specific members, or hopeful members, of primary and secondary Discourses are the characters in the research narratives. There are also general actors that undergo or cause events in these narratives. In educational research, the central characters often undergo events that are caused by members of primary and secondary discourses while the researcher openly narrates these events. In a Discursive interpretation of the text, Alan is the actor in a primary Discourse that he brought into a Secondary Discourse. Alan is a person who would like to be a member of the Discourse of cinematographers. He is making attempts to join this Discourse by engaging in several behaviors, which include searching for subject matter, locating actors, organizing a set, taking footage, editing footage, and finding audiences for his final product.

Those who conceptualize literacy into Primary Discourses of home and Secondary Discourses of school might praise the fact that I allowed Alan to show the film in class. Even so, a narrator of Discourse in research might also be concerned about the fact that I was not developing the Discourses of the other students because I could not teach them how to make films like Alan had learned to do. In melding the idea of Discourses and habitus, critique may arise about whether Alan was allowed to pursue the Discourse of film while other students' Discourses or desires to attain Discourses were not attended to at the same level. Since the Discourse of film carries with it some notions about reading pictures and critical literacy, a narrator using a Discourse frame might shift the conversation into one about disciplinary literacy (Lee, 2007) and using the skills of critical visual literacy in more efficacious ways than I may already be doing.

The individual activities in which Alan is engaging also represent attempts to enact the individual literacies that make up the habitus of the filmmaking Discourse. With a FoK orientation, Alan's filmmaking serves as a starting point for investigating whether his father has a career or recreational interest in film. Using Discourse as the primary tool, Alan's filmmaking is about whether others who are already in that Discourse could ever accept him as a full-fledged cinematographer. The Discourse lens, and the habitus from which is it derived, do not allow very much space for people to declare their own literacies. FoK calls the economically valuable literacies

Funds. A Fund can be spent like capital, and therefore someone else has to recognize it. In contrast, a CoL frame allows a person to both call himself and be called literate, since the focus is on what people do as they negotiate and build identities on various landscapes.

Drawing Conclusions about the Tools

In examining these tools, first from a simpler teacher positioning perspective, and then from a more complex character, actor, narrator analytical perspective, several implications come into view. The first implication is a practical one of audience in writing and reporting qualitative research, particularly where narratives are used as data. The second is a more complicated implication about methodological possibilities for qualitative research.

Practical Implications of Audience

The audience to which I wish to present my work about Alan's literacy will inform which of the four lenses (and of course, there are others) I might use to interpret this narrative in context. By employing FoK, I assume that my audience cares about curriculum making, based on what I can determine about Alan's economic home culture. If I use CoL, I assume the people who read my work will be interested in the tension of Alan's need to embark on long-term projects in a school system that rarely makes space for that. A habitus analysis serves readers who want to know about the status of Alan's family because of the films he made and the potential for access that other groups have. An audience inclined towards Discourse is prepared to hear about Alan's identity as a filmmaker as it develops across his various projects, and whether his teachers provided ways to support him and others in developing similar positive identities.

While researchers are advised to determine which methods and tools of analysis to use based on research purposes and questions (Creswell, 2011), a host of other factors push on the researcher to generate certain questions or use certain theoretical lenses. A researcher's own comfort or experience with one of the tools may cause an analysis to come easier from that frame. A funded project might demand a certain form of analysis be used in order to demonstrate whether large quantities of money used to conduct the research were used wisely. The interest in the teacher, the subject matter, the learners, or the milieu will also influence the type of lens used.

Methodological Implications for Qualitative Research

Since multiple frames can be used in analysis, several possibilities open up for developing richer qualitative methods. One possibility is to layer the analysis with the resonant pieces of both frames. In this configuration, a separate analysis could first be conducted through each frame, and then the overlapping pieces could determine the findings. I conducted such an overlapping process when I studied the narratives of food-giving that took place in my junior high classroom (Rice, 2011b). In the present paper, I overlaid Bal's (2009) work over each of the tools to produce

varying insights, since I wanted to examine each of the tools as if they were narratives about how research can be analyzed and interpreted. What I did was take one boy's story, overlay it with Bal's tool, and then superimpose each of the tools in turn while comparing and contrasting them to produce as many pathways of insight into Alan's literacy as I could.

The analytical insights that overlap might be judged as having more narrative resonance (Clandinin, Pushor, & Murray Orr, 2007) because these insights develop across more than one analytical tool. Another way to shape findings might be to focus on the outlying insights that emerge during an overlapping process. These nonaligning findings may be the ones that resonate as unique contributions because they only emerge in one frame. The insights that emerge during the overlapping process—be they compound or singular—might lead to new insights on research projects for researchers looking at both new data and projects previously published.

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Appendix

	Who narrates the findings in this program of research?	Who are the characters in the narratives of this program of research?	Who are the actors in the narratives that emerge in this program of research?
Funds of Knowledge	Teachers in an ethnographic stance	Specific members of families and communities	Families and teachers
Curriculum of Lives	Children—mediated through researchers	Specific families and children	Families, children, and teachers
Habitus	Anyone—teachers, researchers, politicians, since narration in this stance occurs outside of formal research—who has cultural capital	Specific members of social groups	General members of social groups and/or the characters
Discourses	Researchers	Members, or hopeful members, of Primary and Secondary Discourses	Individual members or hopeful members of primary and secondary discourses and institutional representatives of Primary and Secondary Discourses

Book Reviews

You Have to Be Somebody Before You Can Share Yourself: Applying *You Are Not a Gadget to Education: A Manifesto* by Jaron Lanier. New York: Alfred Knopf, 2010. 224 pp., ISBN 0307269647. (Reviewed by Julie Rust and Beth Buchholz.)

"We are going to try something new today," I (Julie) said with great optimism to my class of 32 future English teachers that unseasonably warm February afternoon. "Inspired by the way that academics use Twitter to tweet comments related to sessions and speakers at conferences, I've decided we will use an online polling platform to interact with an article I read aloud in class. As you listen, text some comments or questions about the arguments raised and they will show up on our projector. Your contributions will be anonymous, so don't worry if you think your question might appear obvious to someone else." Before I even had the words out of my mouth, three clever twenty-year-olds had already sent sarcastic texts to the front of the room, much to everyone's delight.

The tone of the responses changed little once I started reading. Although a few kind, mature souls tried to keep their text messages related to the article, the majority of the messages foregrounded off-color humor rather than scholarly engagement. I, one who generally anticipates the problems with my novel pedagogical moves, was completely blindsided. Was the article I chose not intellectually stimulating enough? Does the cell phone, as a medium, promote social, silly interaction? Did this "open culture" and participatory structure invite students' individual voices to be heard, or did the structure support mob-like behavior that in essence diminished the diversity of responses?

Coincidentally, this incident actually took place while the authors of this review were beginning to envision how Jaron Lanier's (2010) book *You Are Not a Gadget: A Manifesto* might be relevant for teachers, teacher researchers, and the field of teacher education. Schools have historically been slow to introduce new technology into the classrooms, and although the book is now two years old, nearly ancient in the fast-paced world of the digital, many schools are just now beginning to address the changing landscape. (For instance, our local school corporation recently invested two million dollars in the purchase of iPads for all students and teachers.) While not speaking directly to educators, Lanier's critical perspective on the current digital landscape—including the often praised open culture of the web—serves as an important voice in ongoing conversations about the role of technology in schools, and ultimately the role of technology in our students' lives and our own lives. Rather than frame the subversive texts in the previous vignette as an issue confined to the classroom, Lanier takes a wider view of these kinds of anonymous, participatory practices, situating the subversive texts within a larger milieu of digital culture. In this essay we aim to concretize his ideas about the current state of web design and

online participation by transporting them to our most familiar spaces as educators, teacher educators, and education researchers.

As a computer scientist and pioneer in the field of virtual reality, Lanier assures readers throughout the book that he actually does “love the internet,” but his concern stems from the fact that the freedoms associated with open culture have been “more for machines than people” (p. 3). Lanier’s manifesto comes, ironically, at a time when teachers and educational researchers are looking, more than ever, to integrate teaching pedagogies that reflect young people’s “technology funds of knowledge” acquired at home and outside of school (Labbo & Place, 2010, p. 12) through promising Web 2.0 platforms such as Facebook, wikis, YouTube, Twitter, blogs, chats, and forums (Jenkins, 2006; 2008; Greenhow, Robelia, & Hughes, 2009; Young, 2010). Because of the contrasting conclusions being drawn at these intersections between Web 2.0 technologies and learning, we will explore Lanier’s argument through an educational lens in the following three areas: 1) learner identity, 2) consumption and production practices, and 3) testing/assessment. Each section begins with a short vignette gleaned either from Beth’s research experience in elementary school or Julie’s teaching experience in a high school classroom, in order to show the relevance of these themes to educators at all levels.

Learner Identity & Group Practices

The classroom teachers and I (Beth) stared at the computer screen, dumbfounded. Just four hours earlier, we were gloating over how democratically and respectfully elementary-aged students had engaged in their weekly face-to-face community discussion. This week’s topic, collectively creating rules for a recess tag game one student (Alex) had initiated, had elicited serious ideas for rule revisions and resulted in Alex extending the conversation by creating a website for his peers to anonymously contribute additional comments online. But instead of seeing more evidence of thoughtful deliberation later that day, we were struck by the change of tone in the most anonymous comments glaring off the screen: “Well this rulebook is really boring,” “This is an annoying website!” “This game is not sacred,” and “These rules are stupid.” We couldn’t help but wonder: What changed between the collective face-to-face classroom discussion and the open invitation to anonymously comment online? How does anonymity affect self-expression? Are the practices and attitudes we value in our classroom carrying over to online spaces?

Student-centered learning has long been the mantra of the education community, and it is often professed that the best teachers must really take the time to “know” their students. Issues of “who our students are” in a digital culture must take into account both physical and virtual self-representations, so Lanier’s pessimistic estimate of how current digital platforms limit self-expression seems relevant. He writes that Web 2.0 designs “actively demand that people define themselves downward” (p. 19), resulting in reduced versions of self and relationships, so this

may prove directly relevant to how we as teachers, researchers, and teacher-educators perceive our students, ourselves, and our classrooms.

Interestingly, he sees current participatory web designs as encouraging an absence of authentic identity through the veil of anonymity, which creates conditions ripe for “troll-like behavior,” fostering a “brittle” communication landscape where “insincerity is rewarded while sincerity creates a lifelong taint” (p. 71). Lanier’s biggest problem with the open culture fostered by Web 2.0, however, has little to do with anonymity. It has to do with the raging battle between collective and individual meaning making. Sociocultural theory (Vygotsky, 1934) is a popular theoretical framework undergirding educational scholarship, emphasizing the role of the collective in shaping identity and thus enhancing learning. Perhaps due to this, educators have embraced Web 2.0 platforms because they seem to embody constructionist (Papert & Harell, 1991) learning principles. Classrooms are, after all, composed of groups of people with the assumption that we learn best by constructing meaning together. Rather than using the term “collective or participatory meaning making,” however, Lanier has much more menacing terms for the type of group dynamics he sees emerging in today’s online culture, such as “pack mentality” and “the hive mind.” He goes so far as to describe the current state of the Internet as “slum-like,” due to collective authorship.

Here Lanier waxes sentimental about the disappearing “phenomenon of individual intelligence” (p. 5):

The central mistake of recent digital culture is to chop up a network of individuals so finely that you end up with a mush. You then start to care about the abstraction of the network more than the real people who are networked, even though the network by itself is meaningless. Only the people were ever meaningful. (p. 17)

While it can be difficult to trace individual contributions on sites like Wikipedia, and comments on platforms such as YouTube or Amazon are often anonymous, Lanier doesn’t fairly address the wealth of platforms that often result in wide identity sharing, such as Facebook, many blogs, and many Twitter accounts. Rather than looking at the ways that people creatively use these platforms, he simply dismisses them as reductionist by design. In addition, classroom Web 2.0 applications almost always feature a teacher’s ability to trace student participation in order to assess their work, and this inability to escape accountability through anonymity may directly counter many of Lanier’s fears. While we think Lanier overstates the potential of “the adventurous individual imagination distinct from the crowd” (p. 50) and understates the power of collaboration (there are two of us, after all, writing this single article!), educators can appreciate Lanier’s warning against the complete erasure of boundaries between authors, since, as he writes: “Any singular, exclusive book, even the collective one accumulating in the cloud, will become a cruel book if it is the only one available” (p. 47).

Although Lanier abstains from providing pedagogical implications, his words on authorship remind us, as educators and researchers, of the importance of

merging digital literacy practices with critical literacy practices. Discussing the complex sources of the media to which we collectively contribute, as well as those we consume as “truth,” should arguably be high priorities for educators today. In addition, his insistence on paying attention to the ways that Web 2.0 shapes users’ identities urges us to increasingly recognize the different ways that the digital media consumed by many young people are impacting how they perceive and represent themselves, in both in-school and out-of-school environments. A final implication we draw from Lanier’s fears regarding “collective production” includes those educators that are using Web 2.0 platforms for classroom purposes; they might consider the tensions that emerge between individual and collective meaning making, as they find ways to maximize the affordances and decrease the limitations.

Production & Consumption

Fifth graders Eli and Peter huddle around a classroom computer. Eli controls the mouse and moves with ease between the video editing software and various Google image searches. The boys have spent the previous few days highly engaged in creating a digital “book trailer” (i.e., updated version of the book report) based on the book Fablehaven by Brandon Mull. “Look! It’s just like the cover of the book,” argues Peter as he points excitedly at the screen. Eli agrees, “That’s perfect!” and right-clicks the image to save it, uploads the image to the editing software, and drags it to the right place in the timeline. The final “book trailer” they proudly share with the class consists of 10 images collected from the web that are woven together with transitions, text, music, and voiceovers. There’s little question that the boys demonstrated a growing set of digital production skills during the production process, but larger questions remain about incorporating projects like this into classrooms. Is remixing digital images a creative process that schools should encourage? Can Google and YouTube searches limit students’ opportunities to visualize books for themselves? Are there dangers to this “remixing” culture? Does “remixing” belong in schools?

As educators look for ways to adapt their curricula to reflect current students’ ever-changing relationships with new technologies outside of schools, Lanier offers some very specific warnings and suggestions in regard to online consumption and production. As mere users of the Internet, Lanier suggests that individuals are being used by “lords of the clouds” (i.e., Facebook, Twitter, Google) to increase already incredible profit margins (p. 200). He uses Facebook as an example throughout the book to show how social media companies’ futures rely on packaging massive amounts of information that users voluntarily provide as “bait” to lure future advertisers (p. 54). As technology becomes an increasingly integral part of daily life, Lanier invites readers to interrogate software designs (e.g., anonymous comments, limited nature of categories on Facebook, defaults on a Word document) before they become fully “locked in” to our digital tools. Lanier’s critique of consumption asks users to read the Internet with sociological imagination (Mills, 1959; Shannon, 2011)—not merely in terms of content, which is where most curricular efforts are currently focused in schools, but also on the software, tools, and design of the

Internet more broadly. In terms of what this means for schools, it suggests that teachers must find ways to build students' awareness of the ways that digital media shape who they are as humans. What's at stake are the very "tools we use to understand one another and the world" and the kind of future that is made possible with those tools (p. 14).

Beyond fragmented, exploitative consumption, Lanier suggests that a deeper issue with the current internet culture is a lack of quality production by individuals—referring at one point to the internet as an "online slum"—as speed is emphasized over accuracy and thoughtfulness. To combat this, Lanier offers some of his most concrete ideas in the book that also link directly to Web 2.0 classroom practices: post a video that took "one hundred times more time to create than it takes to view"; create a website that "won't fit into the template available on a social networking site"; write a blog post that "took weeks of reflection before you heard the inner voice that needed to come out"; and innovate on Twitter "in order to find a way to describe your internal state instead of trivial external events" (p. 21). As an experienced software designer, his overarching message is that Internet users must struggle against the "easy grooves" that technology offers, and that ultimately entrap "all of us in someone else's ... careless thoughts" (p. 22). Lanier's book does not suggest that teachers and students must all become software designers to create change in the culture of the Internet; instead, he asks each user to interrogate online tools and to produce content in ways that preserve what it means to be human. As educators, integrating this kind of critical talk around production and consumption within classrooms would help us allow students to make more informed choices in their online lives—moving them from being used to being users.

Lanier's call for quality, creative online production is contrasted with digital mash-ups/remixes, which he cites as signs that "pop culture has entered into a nostalgic malaise ... a culture of reaction without action" (p. 20). He regards remixes as "schlock" where users steal content (e.g. music, text, video) and mash it together, giving very little credit to the original sources. Remixes can be found all over the Internet and are made possible by its "open culture" design that allows users to borrow/steal (depending on who you ask) creative content that can be put together in "new" ways using digital editing tools. As a practicing musician, Lanier critiques remixes on behalf of the creative, lone, middle-class artist, who is now the loser in an online world where all creative content is "free" (read "worthless"). His proposed vision is a world where creators—not remixers—get paid for their cultural expressions. Lanier's disregard for remix culture is reminiscent of Dyson's (1997, 2003) work looking at young writers, where the romantic image of the lone, creative, original author is contrasted with authorship as a process of appropriation and recontextualization of children's textual resources (e.g., superheroes, movie characters, rap music, cartoons). Whereas Dyson sees the positive learning potential in the practices of remixing cultural resources, Lanier comes across as a bit of an elitist, as he sees remixing as a form of content theft that is ruining Internet culture.

We believe that schools must begin to consider digital remixes as a legitimate genre of writing that offers students new ways to communicate with audiences, as

well as addressing this idea of “quality” digital production with students. Certainly there are remixes on the Internet that may be considered “schlock,” but there are also deeply moving, funny, inspiring, and engaging remixes that convey new messages beyond the disparate collected bits of content. Perhaps the real danger is not remixes themselves, but the speed at which everything in the digital world can be produced. Lanier contrasts this with the academy:

Academic efforts are usually well encapsulated, for instance. Scientists don’t publish until they are ready, but publish they must. So science as it is already practiced is open, but in a punctuated, not continuous, way. The interval of nonopenness—the time before publication—functions like the walls of a cell. It allows a complicated stream of elements to be defined well enough to be explored, tested, and improved. (141)

This insight into the importance of slowing down the process and building in an interval of “nonopenness” before publication are directly applicable to the ways production (i.e., writing) might be conceptualized in classrooms. Teachers must work with students to identify production possibilities that necessitate the immediacy offered by the Internet (e.g., writing a blog post about a timely event in the community) and production possibilities that invite a “cell wall” to be constructed as peer review informs a lengthy, student-driven revision process.

Testing and Assessment

It was my (Julie’s) fourth year of teaching, and I was so thankful to finally have a classroom set of laptops for my 9th grade English classes. There was just one small catch. The grant that had so generously provided these laptops required that we use a computer-based essay grading system as a pre- and post-assessment for students. I was told that students loved the immediate feedback the program contributed, a score on a 5-point system, on areas such as word choice, sentence fluency, and grammar. I was told that students were finally exhibiting motivation to revise and edit, quickly resubmitting essays in order to see if they had improved their score. And I was told that such a program could save me hours of grading time. These predictions proved accurate, but an entirely different host of concerns began to plague me regarding using computers for grading essays. Where is the authentic audience here? What formulaic writing styles are these essay-graders programmed to legitimize? Are students writing to make meaning or to “play the game” according to the rules they are picking up?

Lanier doesn’t directly address these computer-based essay graders, but his most explicit connection to the educational community involves his critique of the standardized test movement, in which “tests drive instruction so that a student will look good to an algorithm” (p. 32). Connecting standardized tests to Facebook, he writes: “Both degradations are based on the same philosophical mistake, which is the belief that computers can presently represent human thought or human relationships. These are things computers cannot currently do” (p. 69). It is this

“perverse faith” in technology that Lanier finds particularly revolting, and his humanistic philosophy drives him to repeatedly claim that “being a person is not a pat formula, but a quest, a mystery, a leap of faith” (p. 5).

Notably, Lanier does not address the very different purposes Facebook and standardized tests serve. While the former is an informal space for social connections, the latter is being used to legitimize the closing of schools, driving policy decisions, and limiting teacher autonomy. And while few individuals would claim that friendships and identities are entirely represented on this virtual space, administrators and policy-makers often act as though learning is captured within standardized test scores instead of recognizing the “mystery” inherent in the process of learning and representing learning.

Lanier fears that tests that involve humans facing off with computers (which happens to be the format of much digital learning software today, including essay graders) may reveal something even darker than just inaccurate portrayals of learning, since it is difficult to tell whether “a machine has gotten smarter or if you’ve just lowered your own standards of intelligence to a degree that the machine seems smart” (p. 32). His warning helps me make sense of my misgivings with allowing computers to score students’ personal writing: such educational technology is tempting in its efficiency, but it tends to privilege an algorithm over students. Some questions, however, remain. Do we completely abandon these tools because of their flaws? Is it possible for future, more sophisticated programs to be developed that could better measure our essays and motivate improvement for the idiosyncratic ways we make meaning through words?

Final Thoughts

You Are Not a Gadget is most likely not the type of book that practicing educators will race to grab off the shelf to read after a long day with kids. Its philosophical reach and fragmented, subtitle-cluttered format (noted with irony, due to Lanier’s constant critique of the “fragmented” nature of online communication) make it at times brilliantly original, and at other times, difficult to follow. Lanier’s manifesto reveals a very eccentric brand of brilliance, the type you expect to emerge out of a land of virtual reality and neuroscience. Readers may very well find themselves nodding emphatically to his points one moment, and the next, unsure whether to laugh at his ridiculous logic or feel embarrassed for not following him. But these very weaknesses are also his strengths. Lanier doesn’t employ accessible, well-worn metaphors or analogies. It is his fresh language and original ideas that make his manifesto well worth reading for an educator.

Lanier’s book, for instance, helps reframe the college classroom incident described in the opening of this article. The failure of the pseudo-Twitter activity from the opening vignette could be linked to identity, because student contributions were anonymous and the “mob-like,” juvenile behavior that ensued should have been expected. Or we could think about the unsatisfying student participation in terms of the way the design of the media promoted poor quality production: students are accustomed to using their cell phones for social purposes and the

speed with which the comments were texted to the front of the room discouraged thoughtful, careful participation. Or there were the myriad ways the choice of this platform for informal assessment of comprehension of the article was a poor choice, as it caused issues of poor design to be transformed into issues of poor pedagogy.

Of course, limitations plague every educational tool, from the traditional textbook to forum-based discussion. But the danger comes not in using imperfect tools in an imperfect system or culture, but in being unaware of the potential pitfalls of the new, the shiny, and the digital. Lanier's work is one contribution to a growing field of thoughtful critique regarding the digital landscape we find ourselves in, and if we, as the educational community, are willing to read with an open mind, his contrarian spirit may encourage us to consider more thoughtfully the paths we are on and whether we can (or should) consider different destinations.

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Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media, by Mizuko Ito et al. Cambridge, MA: MIT Press, 2010. 419 pp., ISBN 978-0-262-01336-9. (Reviewed by Thomas Patrick Huston.)

Introduction to Publication's Goals and Format

Hanging Out, Messing Around, and Geeking Out is a collection of essays and ethnographies on digital culture where the writers of various chapters, with one collective voice, focus on the repercussions of the emerging paradigm shift on learning, friendship, families, intimacy, production, gaming, and work. The title of the book itself contains actual phrases used by youth to define certain “trajectories of participation” with new media, where “their modes of learning and their social networks and focus begin to shift” (Ito et al., 2010, p. 17). “Hanging out” is linked to gaming with friends, “messaging around” is in line with production of media and “interest-driven” activities, and can evolve into “geeking out,” which refers to the “intense commitment or engagement with media or technology,” depending on genre of participation (p. 17, 65).

The book is comprised of various articles by authors who worked together, offering a thread of continuity, regardless of chapter, and communicated with the same goals and terminology. Each author’s work was guided by four central points—“Participation, publics, literacy, and learning”—and two main questions used for research: (1) “How are new media being taken up by youth practices and agendas?” and “How do these practices change the dynamics of youth-adult negotiations over literacy, learning, and authoritative knowledge?” (p. 13). Goals of the publication include addressing the following issues:

- (1) How specific new media practices are embedded in existing (and evolving) social structures and cultural categories
- (2) Documenting youth new media practice in rich, qualitative detail, to provide a picture of how young people are mobilizing these media and technologies in their everyday lives
- (3) How youth are able to negotiate social status among peers
- (4) How youth gain autonomy from parents
- (5) How youth acquire expertise in related domains such as knowledge seeking on the Internet
- (6) How educators, parents, and young adults engage in structuring youth new media practices (pp. 9-12).

Terminology

“Kids” is the term chosen to reference children thirteen years of age or younger. “Teenager” is used for reference of subjects between thirteen and eighteen years of age. Other new terms emerging to define what youth are experiencing in regard to interaction with popular and digital culture can be summed up with the terms “Participatory Media Culture” and “Hypersociality.”

Instead of somewhat commonly used terms like “digital media” and “interactive media,” the authors have chosen to use “new media” (p. 10). The needs of youth have a huge impact on how they engage with new media. Terms like “participation” can also be viewed as “traffic” and youth “production” as “user-generated content” (p. 11).

Learning and New Media’s Impact on Education

The research findings proposed by the authors are interesting, surprising, and at times worrisome. According to the authors, learning happens in informal settings, rather than from explicit instructional agenda. How youth pick up literacy in these informal settings is difficult to reproduce in the contexts of schooling and testing. These findings suggest that in some ways public education is no longer effective to achieve its original goals for youth and learning. The current testing culture obviously could never include the interests of youth, the creativity, and/or the technological platforms and genres, but schools could change their culture when it comes to curricula and methods of delivery that match current student interests. However, because of tests and their importance to teacher jobs, salaries, administrative staff and teachers’ continued employment, it would seem likely that schools will continue to move away from the type of learning and engagement youth are experiencing online. This is a sad commentary and ultimately a paradox, because schools do want youth to learn, yet the opposite is happening, and learning occurs outside of the school building.

Another interesting research finding is that unlike in hierarchical and authoritative relations, youth are constantly contributing, evaluating, affiliating, and competing with peers online. Ito’s book also states that social media allow for youth to discuss intimate matters they normally would not because of embarrassment. Schools that rely heavily on structure, discipline, and top-down instructional strategies offer students the exact opposite of what they find appealing when it comes to working with and assessing peers and their products. The authors also point out that the asynchronous environment of networking has rules and advantages for intimate communication and expectations, along with benefits not found within the traditional classroom setting. The fact that the student “classroom” can extend into synchronous participation would be one of the greatest assets of new media; however, one must question how often participation cultivates actual learning, and whether youth are “hanging out” more than “geeking out.”

The authors do not suggest that youth are going to monopolize these new media, but rather that they are forging their identity through them by simply taking the lead. As a result, they will impact future generations when it comes to how new media is referenced, adopted, and so on. The authors use the example of texting as a recent youth practice that is now considered mainstream on all levels, regardless of age group. This is hopeful in that perhaps traditional schools can adopt new curricula and pedagogical strategies that are more in line with what and how youth currently learn.

One of the more alarming ideas presented via ethnographic observations is that “[y]outh exhibit agency and expertise that often exceeds that of their elders, resulting in intergenerational struggle over authority and control over literacy” (p. 14). Never before has the following quote, made in 1897 by John Dewey, been more important for public education curriculum writers to recognize: “I believe that the only true education comes through the stimulation of the child’s powers by the demands of the social situations in which he finds himself” (p. 1).

Recent research supports the findings in Ito’s book. According to Joseph Tobin’s article *Ethnographic Studies of Children and Youth and The Media*, “Most engagement of children with popular culture and cutting edge forms of digital technology occurs outside of school” (Levinson et al., 2011, p. 213). Both the Tobin article and the Ito text suggest that youth implement their own learning through participation with new media completely on their own without traditional “teachers,” but they also evolve their knowledge by seeking out peers who have a higher understanding of the subject being investigated, discussed, and produced. This suggests an amazing concept: students define who they are as learners by selecting their own curriculum and instructor, whether the curriculum was purposely written for them or not, and whether or not the information heightening one’s expertise is delivered via a trained instructor or a peer who happens to be an expert. One reason behind why students evolve their knowledge completely on their own is explained by Margaret Eisenhart: “building or claiming an identity for self in a given context is what motivates an individual to become more expert” (Levinson et al., 2000, p. 370). Recent research also shows how new media help students understand each others’ differences. Jan Nesper states, “How kids differentially positioned by language, gender, race, or age use media not only to make meanings, but to articulate interactions among themselves and across those dimensions of difference” (Levinson et al., 2000, p. 346).

Ito’s book discusses how new media have written extremely creative curricula for the engagement of learning *without even trying*. One of the scenarios described a girl typing in various search terms in a photograph-hosting website where each searched term supplied thousands of photographs that users had labeled with the term. Educators can utilize curricula such as these for all kinds of scenarios, from word-picture associations, hypothetical assumptions one makes about these associations, etc. The authors also state that new media aid teens in developing economic and political powers; most schools’ state objectives strive for students to engage and forge identities within these two powers.

Conclusions and Questions

While the majority of observations made in Ito’s book suggest kids are not passive with new media, but are instead involved in an active process on a variety of fronts rather than a mere audience member ingesting what is presented before them, it does not suggest what youth might be *absorbing*, or the potentially negative aspects of an online environment. Social etiquette and ethics, with regard to new

media, are two largely ignored themes in the book. Many questions posed in the following paragraphs are ideas for research and exploration.

New questions should be explored as research in youth and new media evolves. How do youth, or adults for that matter, engage, honor, or observe online social etiquette? Ito's book suggests certain online boundaries are honored by youth. It will be interesting to see if these boundaries can survive over time, especially if adults do not eventually become literate in new media. Because social status is such an important factor in how students engage with and develop their identity through social media, I'm wondering about those things that go unsaid or unnoticed by ethnographers. For instance—and this is glossed over in the intimacy chapter in Ito's text—how much do kids take a role in the “art of not appearing” that they are online? That is, how many hours might be wasted online only to appear as if one isn't? After all, social status is all about looking important and busy, and social networking and its place have evolved and are still evolving with their *own* identity as an entity unto itself.

What about online safety? In many ways, social networking, or one's profile, regardless of platform, is like opening the curtains and even the front door of one's house, and possibly offering a microphone as to a person's actions. How is privacy defined? Because of all the options one has for dialogue, and the permanence new media gives to thoughts, ideas, and actions via text and multiple media production, and terms such as “Did you Google him?”, it makes one wonder how youth, or adults for that matter, engage in the act of stalking or information seeking, where ethics might play a role in the matter, and if the social etiquette being observed and taken for granted is enough for the important boundaries mentioned in multiple chapters to survive over time.

What about ethics? YouTube is littered with thousands of short instructional videos on how to hack private accounts or ideas for cheating on tests, and youth are also the only ones who might understand the methods and processes for implementing or finding this type of information. If educators are ignorant of what, how, and where kids gain meaning and learning, how in the world will they know where negative actions might take place? And who is there to teach youth right from wrong once they arrive at a place where an ethical decision is at hand? YouTube videos also offer “playgrounds” for user comments where thousands engage in abusive and threatening language often filled with racism, hatred, homophobic and political rants, and all these types of comments are usually done under the guise of anonymous usernames.

Other examples have surfaced in the news within the past two years, showing how the absence of ethics in new media and youth is a bad mix. One example would be sexting. A girl committed suicide after a nude photo of her surfaced and was digitally passed around her high school. Another story involved a group of sixth-grade girls who made a cartoon video with images of them beating up another girl, and they sent the video to the girl via e-mail.

What is normalcy in new media? It appears hacking people's credit card information or posting private photographs online without one's permission is slowly arriving at normalcy, and that has to make one wonder about how to implement a discussion of ethics into new media dialogue. Online anonymity can be a catalyst for the continued dualistic, argumentative culture in America. Civil dialogue and acceptance of opposing views will never evolve if there are not models somewhere from which to learn. And how large of a role does online mimicking play when it comes to reproducing these negative behaviors in social networking?

What about online addiction? How has the act of being online "too much" come into play in youth involvement with social networking or gaming? China has opened numerous facilities designed specifically for online and gaming addictions (one such facility recently involved a youth suicide), and one has to wonder how and where psychology plays a role, and how large, in new media. Virtual connectivity can help salvage education and society, but at the same time, it can distract people from the true connectivity found within actual physical space via environment, nature, and humanity.

Ito's book does not explore commercial media's role too deeply either. What impact does advertising, if any, have on youth culture? How is online advertising evolving online, and how might this affect student participation? If youth seek everything that is involved with the learning process on their own, again, who is there to tell them that a value put forth by an advertiser is wrong or not good?

Dialogue is necessary for everyone to fully understand new media and its implications. There are many more questions to ask as this dialogue gets underway. Is it possible for new media to be a distraction from the more important things in life? Is it ethical for society to allow for Facebook updates while thousands of people are homeless and/or starving? Does any new media focus on the digital divide at hand? Does new media allow for youth to question their own ideology surrounding power structures and new media's role? Countless investigations suggest connectivity is a large part of something that can salvage education and our society, and although connectivity exists within a virtual framework, we must remember that at the same time it distracts us from true connectivity with physical space, nature and humanity. Does new media actually make us more alone?

Ito's book is an important and overdue analysis of the results of America's challenges from the paradigm shift our culture is experiencing. It is a book everyone should read—not just educators, but parents too. The most important point to consider when reading about new media is that it is constantly changing, along with youth's interactions within it. Unlike television and youth, there are constant evolutions every month in how and where youth interact online. Newer popular platforms like Pinterest and Instagram didn't exist when this book was written, while Myspace is now a ghost town and Apple's social networking site Ping has simply disappeared. Future ethnographers need to remember that youth are still youth, impressionable and naive, and if they are jumping into an endless virtual well of information and values not recognized by educators, parents, or adults, then

public education needs to get on board now more than ever to aid in this incredible new media learning frontier.

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White Kids: Language, Race, and Styles of Youth Identity, by Mary Bucholtz. New York: Cambridge University Press, 2011, 296 pp. ISBN 978-0521871495. (Reviewed by Ashley Patterson¹)

Race and racial identification have long been and continue to be devices of separation in American society. One's racial affiliation is expected to determine characteristics such as language use, stylistic choices, and ways one engages in the act of being a student. Definitions of what it means to be a student involve intellect, educability, and upward mobility—all traits that are also linked to race in the American psyche. Hegemonic ideologies that centralize Whiteness and present Whiteness as the norm deemphasize—or completely deny—the fact that Whiteness is itself a racial culture. In her book, Bucholtz challenges assumptions that consider Whiteness to be the given standard from which all other cultures differ. She seeks to build an understanding of Whiteness as a social construction, as is any race, through analysis of the languages used and styles enacted by White students at a San Francisco Bay Area High School.

While the word *literacy* is not found in her title, nor is it a highlighted theoretical feature of her introductory chapter, it can be argued that literacy is, still, at the core of Bucholtz's work. Bucholtz gets at the racial underpinnings of literacies in which her White study participants engage; those literacies are grounded in discourses of Whiteness. As fellow linguist Gee (1989) explains, a useful and accurate understanding of a definition of the term *literacy* necessarily relates to an understanding of the term *discourse*. Gee explains discourse as the cultural practices that regulate one's thoughts, speech and actions in a way that allows one to "do" a certain role (e.g., a White teenager, a preppy teenager, a nerdy teenager, etc.) and that simultaneously allows others to interpret those communicative actions as recognizable performances of that role. Gee argues further that people acquire primary discourses through the ways in which they are "encultured" to make sense of the world, but that they have to develop, through practice, secondary discourses, which are those that allow them to communicate or perform roles recognized or accepted by those with whom they interact in settings outside of their primary communities. Given these ideas about discourse, Gee then defines literacy as "control of uses of language in secondary discourses" (p. 6). Each of the participants in Bucholtz's study are engaging in discourses outside of their primary, home discourse—thus secondary discourses—and her work is focused on understanding the ways in which they masterfully do so while in the process of identifying themselves in and by way of those discourses at the same time. Though literacy is not the term that the author employs, Bucholtz's work is no less important to studies of discourse, literacies, and educational sociolinguistics.

Bucholtz completed her ethnographic study in the mid-1990s and utilizes a sociocultural linguistic theoretical frame for data analysis. Her overarching argument is that racial identity and style can be witnessed and tracked through a

¹ I would like to thank Dr. Elaine Richardson for her constructive comments on working drafts of this review.

multifaceted look at the language choices that are made by speakers adhering to particular identities and styles. Across eight chapters, Bucholtz first analyzes the stylistic symbols by which White students at Bay City High School develop and enact identities that she categorizes as preppy mainstream, White hip hop fans, and nerd styles. She then considers communication practices that White students utilize when discussing race in general and Whiteness in particular. Bucholtz has sifted through what is undoubtedly a tremendous bank of artifacts, recordings, and field notes to present a clear, succinct and readily consumable narrative chronicling a brief period in the performance of identities and styles of White students at Bay City High School.

Bucholtz argues that an approach to thinking more about racially based issues of youth identity that is founded in sociocultural linguistics “offers a largely untapped resource for nonlinguistic scholars concerned with racial power and identities to examine how race is built on the everyday ground of discourse and interaction” (p. 15). Her work throughout the book supports this assertion as she explains technical aspects of linguistic concepts in ways that are accessible to nonlinguistic readers and, in doing so, clearly identifies the relationship between these concepts and the development of discourses of Whiteness. In her analysis of the racial discourse of her study participants, Bucholtz highlights both what was said and how it was said. She also applies the tenets of interactional analysis, “which view spontaneous spoken language as the machinery that produces the social world moment by moment” (p. 7). The varied performances of Whiteness and racialized linguistic practice were captured in “words, pronunciations, and grammatical structures as symbols of social meaning,” an approach that allowed her to focus on how students “*did*” Whiteness instead of how they *were* White (p. 8). Bucholtz is effective in her approach, as witnessed by the convincing portrayals of students identifying with three different styles of Whiteness.

Bucholtz’s treatment of Whiteness and White identities is part of a fairly new component of racial studies. As the author notes, Whiteness has been presented as hegemonic (Gramsci, 1971), invisible (Dyer, 1997), and a lack of culture (Frankenberg, 1993; Perry, 2001). Each of these explanations falls short of fully entering Whiteness into the larger discussion of race, as none of them acknowledges the fact that the concept of Whiteness, along with all other concepts of race, is a social construction. Bucholtz offers several less restrictive presentations of Whiteness including that it is situated and situational, and that it is multiple in that it coexists with other identities, including those related to class, gender, and sexuality, among others. Using a working definition of identity that describes it as “the social positioning of self and other,” she utilizes these complex, problematized frames of Whiteness in her analysis (p. 2). While she tackles issues around Whiteness that few other researchers are currently attempting to dismantle, she falls short in giving importance to the broader racial contexts within which her observations were set.

In her setup of the description of Bay City High School, Bucholtz explains the tenuous relationship shared between Blacks and Whites at the school and notes that

much of the tension was born of perceptions that had no foundation in actuality. This gives the reader an impression of a critical theory-based approach to her work. However, particularly in Chapters 8–10 that discuss how Bay City’s White teenagers engage in racially-based discourses, Bucholtz fails to take up several opportunities to further this trajectory. When labeling themselves, some of the students made comments such as, “I’m white, but I don’t really identify with my race” (p. 210). The author does not examine such statements from the angle that such a standpoint emphasizes the position of privilege that White students at the school enjoyed, though the statement above and several others like it seem to beg such a treatment. One of the topics that sparked the students to engage in conversation about race was their mandatory participation in a multicultural class. Some of the comments made about the class included one student saying, “Multiculturalism ... Teach people how to hate white kids ... I’m really bitter about that class,” and another asserting that it “was hell for me” (pp. 191, 192). While Bucholtz briefly presents positive experiences by African-American students in the class as well, she does not do much more with the aforementioned statements than to offer them as examples of the reverse-discrimination discourse in which many Bay City students engaged. Further, the race of the multicultural class teacher, an African-American male, was specifically named, though structural and societal issues around the fact that a minority would be assigned to such a position were not noted. To be fair, Bucholtz expresses the discomfort she felt both in bringing up topics of race given the strained racial climate of the school, and in having to hold back her personal ideas about race that often conflicted with the students’ observations, in the name of staying true to her stance as an ethnographic researcher. The analysis Bucholtz provides post-data collection unfortunately still does not succeed in sufficiently contextualizing or problematizing some of the more troubling beliefs about race that were communicated. Given the tumultuous history between Blacks and Whites in the United States that continues to shape race relations today, it does not seem that any discourse about race in America can be complete without a clear grounding in this sociohistorical context.

As just indicated, the duty of the ethnographer to not remove him or herself from the work while also not unduly influencing the study participants is not forgotten by Bucholtz. When appropriate, throughout the book, the author reminds the reader of her potential biases as a White female observing and writing about White teenagers while making a concerted effort not to cloud her data by pushing her own antiracist ideals onto them. She makes references to decisions she made as a graduate student that she continues to question almost two decades later. This self-awareness as a researcher serves to make the information shared ever more visible for the reader, as it highlights the humanity that is the subject of the work.

In another reflection on the past, Bucholtz dedicates a few of the final pages of her book to noting how times have changed since her observations made in the 1990s. She cites the changing racial demographics in California and the US, which have seen Latinos outnumber African-Americans as the largest minority population, and the election of President Obama as signs that we live in a new time. Her commentary, however, again does not do enough in acknowledging that racial

identity is itself an ever-changing process, and is even more dynamic given contextual backgrounds that are also in constant flux. Irrespective of this somewhat underwhelming conclusion, Bucholtz's study is overall a fresh, entertaining, and linguistically thought-provoking approach to examining the development of White youth identity and style that will hopefully help to shape the future of racial understanding in America.

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